

NEW LABEL FOR HORTICULTURAL SPRAY OIL

by Warren T. Johnson¹

The Environmental Protection Agency has approved a new label for Sunspray 6E, the trade name of a product refined by the Sun Refining and Marketing Company, Philadelphia, PA and sold for the control of insects and mites.

The properties of this product **not** stated on the label include:

Gravity API (minimum)	30
Pour point °F (maximum)	20
Distillation, at 10 mm Hg.	
°F 50% point	412 ± 8
°F 10-90% range (maximum)	80

The distillation property is the major criterion for separating this product from other oils presently on the market. Sunspray 6 and its emulsified form 6E, is marketed over much of the United States. The same product (Sunspray 6E) is also marketed by many agricultural chemical companies but under their own label and trade name.

It is important for users of horticultural oil to know and understand the differences between the old and new product and the ramifications thereof. This paper is an amplification of these changes.

Figure 1 illustrates the label as produced by Sun. Their product is described as "A Superior Horticultural Spray Oil" and is so stated on the front or center panel. Historically, spray oils have been variously described as paraffinic, mineral, superior, horticultural, dormant and in California, light and light medium spray oil. These terms are essentially synonyms describing the same type of product but the product may differ slightly by properties of U.R. (unsaturated residue) and distillation. Also on the front panel note the flash point is added to the ingredient statement. The temperature at which the oil burns is valuable for storage safety and will be meaningful to those who may use the product on or in buildings. The left panel gives a detailed list of uses, rates and time of application for (shade) trees and shrubs plus other horticultural crops. The upper right panel reveals some major changes in the general

use of the product. One of the main points of interest to arborists and spray contractors is the potential for added efficacy through tank mixes using such insecticides as Ethion, Parathion, Permethrin and other pyrethroids, Lorsban and Supracide. In most cases those listed insecticides should be used at lower doses than is stated on their label. When mixed with oil the efficacy is enhanced making possible the reduced dosage. Also note the wide range of pests that oil will control; here-to-fore not listed on the label.

In the lower right panel under Cautions, note the statement in italics "Do not apply during periods of drought or when plants exhibit moisture stress." The key to potential phytotoxicity during the growing season is a water deficit in foliage. If, by some quirk in environmental conditions, the relative humidity is low, the wind and temperature is high, a moisture deficit will occur. Under these conditions (may occur simultaneously to or immediately following oil application) phytotoxicity symptoms may become evident in the most oil tolerant plants. The user, by label statement, is further admonished that he/she must be alert to local growth and climatic conditions to determine precise timing.

Omitted in the new label is any reference to viscosity, application temperature precautions and frequency of use.

To use oil effectively and with safety to plants, the user must have a good basic understanding about tree physiology and climatic conditions that adversely affect plant vigor. We have no better chemical in terms of human and environmental safety than the superior horticultural spray oils. Their potential with the addition of certain synthetic organic pesticides make the combined efficacy particularly exciting, especially when fighting the sap-sucking insects.

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1. Presented at the annual meeting of the New York State Arborists in Middletown, NY in January, 1983.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

GROUP	INSECT CONTROL AID	Application Rate per 100 Gallons of Dilute Spray	Time of Application (Stage of Development)
APPLES	Apple tree bug	2	Dormant
	European Fruit Lecanomyia	2	Dormant
	Leaf Miner	2	Dormant
	European Pear Mite	2	Green 1 to 2 to 3
PEARS	San Jose Scale	2	Delayed Dormant
	Scurfy Scale	3	Delayed Dormant 4, Green
PEACHES	Obscure Scale	3	Dormant
	Cottony Peach Scale	3	Dormant
	Spider Mites	2	Summer
SHADE TREES	Certain Caterpillars	3	Dormant
	Plant Bugs	3	Dormant
SHRUBS	Same As Trees	3	Dormant
	Ear Worms, Ear Flies, Corn Root Worm	2	Summer
SWEET FLAG CORN	Ear Worms, Ear Flies, Corn Root Worm	2	Summer
	Leaf Miner	2 gal./acre	As Needed
CITRUS	Scapes, Glover (long yellow stem borer) soft scale	1.0-1.3	March & April
	California red scale	1.3-1.6	March & April
Scales listed above and pest mite, greasy spot & stony mid California red scale	1.0-1.3	Zineb — 75% WP — OR — Chlorobenzilate 4	March & April
	1.3-1.6	Finlon 4*	Summer
Scales listed above and pest mite, greasy spot & stony mid California red scale (Do not use in California)	0.5-0.7	Finlon 4*	Summer
	0.5-0.7	Malathion 5*	July-15
Scale insects in post bloom for oil spray (Florida only)	1.0-1.3	Finlon 4*	Summer (June - July 15)

*Add Zineb or chlorobenzilate as listed above for rust mite.



ACTIVE INGREDIENT:
 PARAFFINIC OIL **98.8%**
 INERT INGREDIENT **1.2%**
EMULSIFIER **92% min.**
Unsolubilized Residue **345F min.**
Flash Point **7.1 lbs.**
Weight per Gallon

PRECAUTIONARY STATEMENTS
 Hazards to Humans and Domestic Animals

CAUTION: KEEP OUT OF REACH OF CHILDREN
 Harmful if swallowed. Avoid breathing of spray mists or vapors. Wash hands after using. Avoid contamination of food or foodstuffs.

STATEMENT OF PRACTICAL TREATMENT
 If Swallowed: Do Not Induce Vomiting.
 If On Skin: Wash With Soap and Water
 If In Eyes: Flush With Water

ENVIRONMENTAL HAZARDS
 This product is toxic to fish. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. 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. Pesticide Disposal: Pesticide, spray mixture, or tripartite that cannot be used or chemically processed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.
 3. Container Disposal: (a) Pesticide container and other for reconditioning, or (b) triple rinse for reconditioning and other for recycling, reconditioning, or disposal in approved landfill, or bury in a safe place.
 4. General: Consult Federal, state or local disposal authorities for approved alternative procedures.

EPA REG. NO. 982-11
55 GALLONS NET - U.S. STANDARD



TEN PENN CENTER, 1801 MARKET STREET, PHILADELPHIA PA 19103

USES

1. For use as a **control for scale insects** when applied through a mist blower, **airblast and impinger**.
2. May be used with **Finlon and Parathion** to obtain two modes of insecticidal action.
3. May be used with **Chlorobenzilate** on cotton only.
4. May be used in tank mix with **Carbaryl** on apples, pears, plums, prunes, peaches, sweet cherries and corn, pears, plums, prunes, peaches, grapefruit, mandarin, including strange trees and shrubs, citrus (citrus, grapefruit, lemons).
5. May be used as a **pre-treatment** for certain synthetic organic insecticides applied for pest control in/on habitable buildings.
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CONTROLS

A wide range of true and insect pests in the egg stage such as spider and earwig mites, army and soil scales, mealy worms, catkineworms, plant bugs, earhoppers, and aphids. Will kill other immature forms if spray covers the insect.

CAUTION

Keep 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 apply during periods of drought or when plants exhibit moisture stress.** Do not use in combination with or immediately before application of other pesticides. Do not use in combination with Captan, Telpel, Dylene, Karathene, Moreslan or any other product containing sulfur. Also do not use with Sevin or Imidantole.

TANK MIXES

It is important for users to read and follow all directions and restrictions on the labels of the proposed tank mix products.

ORNAMENTAL PLANTS

Oil might remove the glaucous (blue) bloom from such evergreens as Colorado blue spruce and koster spruce. Use with caution & reduced dosage for summer application on Japanese Red Maple, Amur Maple & Black Walnut. Use with caution & reduced dosage for dormant application on Sugar Maple & Rebutus.

REBUDS

Oil applied after October may increase cold damage to trees; oil applied in August and September may affect sand contents.

TIMING THE TREATMENT

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

MIXING DIRECTIONS

Add sufficient water to the mixing tank to allow proper agitation. Maintain agitation until solution is used. If other pesticides are to be added, do so after the water and oil have been thoroughly mixed.

TERMS

Seller's guarantee shall be limited to the terms of the label and shall not apply to the use of the product under abnormal conditions. Time and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller.

Figure 1. The new Sunspray 6E superior horticultural spray oil for 1983. The major changes are circled.