NEW LABEL FOR HORTICULTURAL SPRAY OIL

by Warren T. Johnson

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, Permethyltrin 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.

Department of Entomology
Cornell University
Ithaca, New York 14853

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.

<table>
<thead>
<tr>
<th>CROP</th>
<th>INSECT CONTROL AID</th>
<th>Application Rate</th>
<th>per 100 Gallons</th>
<th>Type of Application</th>
<th>Time of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLES</td>
<td>Apple Red Bug</td>
<td>2</td>
<td>Gallons of Ultra Spray</td>
<td>Dormant</td>
<td>Dormant (Stage of Development)</td>
</tr>
<tr>
<td></td>
<td>European Fruit</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaf Cruiser Scale</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fruit Tree</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaf Miner</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red Miner</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>San Jose Scale</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scruco Scale</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td>PECANS</td>
<td>Obscure Scale</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td>PEACHES</td>
<td>Cottony Peach Scale</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td>SHADE TREES</td>
<td>Slender Mites</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hornets</td>
<td>3</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant Bugs</td>
<td>2</td>
<td></td>
<td>Dormant</td>
<td></td>
</tr>
<tr>
<td>SHRUBS</td>
<td>Same As Trees</td>
<td>3</td>
<td></td>
<td>Summer</td>
<td></td>
</tr>
<tr>
<td>SWEET CORN</td>
<td>Fall Army Worm</td>
<td>2</td>
<td></td>
<td>Summer-early</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corn Root Worm</td>
<td></td>
<td></td>
<td>Spring-early</td>
<td></td>
</tr>
<tr>
<td>SUGAR BEETS</td>
<td>Mites</td>
<td>2 (gallons)</td>
<td></td>
<td>As Needed</td>
<td></td>
</tr>
</tbody>
</table>

### USES

1. For use as a systemic fungicide against a variety of plant pathogens when applied through a mist spray or ultra fine spray nozzle.
2. May be used with sulfur and lime to obtain two modes of insecticidal action.
3. May be used with sulfur only.
4. May be used in April to obtain control of apple scab and rusts, plum curculio, black spot, and root knot nematodes.
5. May be used in June to control spider mites, codling moth, and tomato hornworm.
6. May be used in August to control squash vine borers and aphids.

### CONTROLS

A wide range of insects and pests appears in the egg stage such as aphids, red spider mite, spider mites, and other pests. Use caution with pesticides, including neem extracts, pyrethrum, and other natural products.

### PRECAUTIONARY STATEMENTS

**Hazards to Humans and Domestic Animals**

**CAUTION:** Keep out of reach of children. Harmful if swallowed. Avoid breathing of spray mist 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 safe for fish. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of waste. 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.
2. Pesticide Disposal: Pesticide, spray mixture, or rinse water that cannot be used or chemically treated should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.
3. Container Disposal: (a) Reuse container and offer for reconditioning, or (b) triple rinse (or equivalent) and, after 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. 862-11

55 GALLONS NET = U.S. STANDARD

---

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

**ACTIVE INGREDIENT:**

- **Paraffinic oil:** 98.8%

**INERT INGREDIENT:**

- **EMULSIFIER:** 1.2%

**Undiluted Residue:** 92% min.

**Wet Weight:** 345F min. 7.1 lbs.

---

**CONTRAINDICATIONS**

*Supersede and Parathion are Restricted Use Pesticides.*

**CAUTION**

Keep container closed and store away from light. Use ca. 8 oz. of oil with all-emergent applications. Use a good emulsifier, such as Selsin. Do not use in combination with any other product containing copper. Do not use with Sevin or other similar products.

**TANK MIXES**

Use tank mixes only if user is familiar with the tank mix procedure and has been trained in its use.

---

**ORNAMENTAL PLANTS**

Use caution with ornamental plants that may be sensitive to oil-based products.

**CITRUS**

Oils applied after October may increase cold damage to trees.

---

**TIMING THE TREATMENT**

You must determine the precise timing to fit local conditions 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 subject to the buyer/user agrees to the product on these conditions. The 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.