

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.

