

DEVELOPMENTS IN MOSQUITO CONTROL

A New Oil-Emulsion Mosquito Larvicide

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The Bureau of Entomology and Plant Quarantine has found that an effective mosquito larvicide may be made by using certain emulsifiers and thus reducing the amount of oil required to about 6 gallons per acre. This

is news which the oil-administration and mosquito-control agencies will welcome enthusiastically.

Among 26 emulsifiers tested only 3 were found particularly effective. All three of these are materials which are sold under trade designations and for which there is no adequate chemical description. The results reported are based on the particular samples received and assurance cannot be given that there will not be considerable variation between lots.

The emulsion is made with 96 parts of diesel oil or fuel oil No. 2 and 4 parts of a sulfated sperm oil (Nopco 1216), a phthalic glyceryl alkyd resin (B-1956), or an 18-carbon-chain complex amine (Amine 230X) as an emulsifier. This stock emulsion is diluted with 5 or 6 parts of water (7 parts of water when Amine 230X is the wetting agent) and applied at the rate of 30 to 40 gals. per acre of water surface. Satisfactory kills have been reported when this emulsion has been used in fresh water, but it is less effective in salt water.

A mosquito control agency in the Pacific Northwest, where floodwater mosquitoes are involved, found that an application of 40 gallons of the diluted emulsion per acre, costing 80 cents, was as effective as the same quantity of oil, costing \$2.40, which had previously been used. The cost of the emulsion included 36 cents for 6 gallons of oil and 44 cents for 1 quart of wetting agent.

The emulsifiers mentioned above may be obtained as follows:

Nopco 1216, from National Oil Products Co., Harrison, New Jersey.

B-1956, from Rohm and Haas Co., Philadelphia, Pa.

Amine 230X, from Carbide and Carbon Chemicals Corp., New York City.

Further research may disclose other emulsifiers satisfactory for this purpose.

Additional details can be obtained by writing the
Bureau of Entomology and Plant Quarantine, Washington, D.C.