

PREPARING MINERAL OIL FOR SPRAYING.

A MODIFICATION IN THE USE OF SOFT-SOAP.

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DURING the past few years winter spraying with mineral oils for the suppression of many sucking insects which appear to be controlled most easily during that season of the year has become very general in the orchard districts of New Zealand. This is especially true of all apple-growing sections of the Dominion where any of the scale insects or American blight are at all in evidence. The mineral oil that has secured fairly general adoption is one or other of the grades of the so-called red lubricating machinery-oils. These oils for spraying are generally procured in a condition denatured with the admixture of a definite quantity of resin, thus avoiding the duty levied on similar oils that are not denatured. The oil requires to be emulsified by the grower before being applied. There are a number of proprietary compounds largely composed of mineral oils that are so prepared that they are immediately ready for applying so soon as the necessary amount of water has been added. For my part, I especially favour the use of these prepared oils, provided they mix easily and uniformly with water and do not develop any free oil on the surface. There appears to be a prevalent idea that an oil is not effective if it does not thoroughly grease the tree and leave it in that condition for several weeks. As oils are supposed to kill insect-life almost immediately, I cannot see the object of having the trees covered with a distinct oily coating for many weeks, and thus interfering with the normal functions of the bark. Again, trees that have been sprayed with an oil spray that leaves the trees oily for a considerable time are difficult to spray with Bordeaux, and this is a point worth consideration.

A great many growers prefer to prepare the mineral oil for spraying themselves, and for this purpose soft-soap is nearly always used as the emulsifying agent. The following modification in the method of using soft-soap is suggested, having been found to be very satisfactory in a series of experiments that I have recently carried out:—

Dissolve 4 lb. of soft-soap in 4 gallons of red oil by heating over a fire. The soft-soap dissolves in a very few minutes—in a