



An hydrometer suspended in a cylinder of water.

sp. gr. is, the larger is the quantity of water that must be added. A suitable hydrometer for this work should have its scale graduated from 1.000 to 1.400, and preferably should also have the Beaumé scale marked on its spindle. A hydrometer of this kind can be secured from Parke & Parke, druggists, of Hamilton, Ont., for 85 cents. The proper quantity of water to be added is found by dividing the decimal portion of the specific gravity by .028 for the winter wash, and .008 for the summer wash.

e.g., Specific gravity of concentrate = 1.320, ∴ each gallon can be diluted to

$$(a) \frac{.320}{.028} = 11.43 \text{ gals. for winter wash,}$$

$$\text{and } (b) \frac{.320}{.008} = 40.00 \text{ gals. for summer wash.}$$

The dilution for the spray, both winter and summer, will vary, however, depending on the fungus or insect being sprayed for, the nature of the foliage and the severity of the infection. A spray calendar should therefore be consulted in order to find the correct figure to use in place of .028 and .008.

In case of the clear concentrates, *i.e.*, those which contain no sediment or "sludge," it is sometimes desirable to add lime. The main function of the lime is to act as a marker so that the thoroughness of the spraying can be controlled. This is especially important when an inexperienced or careless man is at the nozzle. But it has other uses besides: (1) It prevents a great deal of waste by dripping, (2) some claim that it improves the sticking quality of the wash, (3) lime possesses in itself marked insecticidal and fungicidal properties. If lime is added it should be slaked first,

worked up to a thin batter with water, strained free of large particles and then poured into and well mixed with the diluted wash. Never add it to the concentrate before dilution. The amount used varies from 2 to 6 pounds of stone lime per 40 gallons of spray.

(2) Home-made:

It is quite possible to make the concentrated wash at home if one wishes to go to the trouble and expense. After some experience the wash can be made of as good quality as the commercial kinds and at less expense. Directions for making and handling are as follows (See Bull. 92, Penn. Expt. Station):—

50 lbs. best stone lime,
100 lbs. sulphur (flour or flowers),
40-45 gals. of water, at *finish*.