

"When the emulsion is required for immediate use, the quantity of flour may be further reduced. It was found that as small a quantity as two ounces would emulsify one quart of kerosene, but that on standing a few hours a perceptible layer of kerosene had separated.

"It has, further, been found that by scalding the flour before adding the kerosene a less weight is required. An excellent emulsion, which showed not the slightest separation of kerosene after one week, was prepared by scalding two ounces of flour, mixing the resulting paste with one quart of kerosene and emulsifying with two gallons of water.

"The flour emulsion is smooth, readily and easily atomized, and does not clog the nozzle. Any separation into layers (no free kerosene will appear for several days, at least) may be readily overcome or remedied by simply stirring the mixture. It is equally effective, as might be expected, as an insecticide with the lime-formed emulsion, and amongst other advantages that may be claimed for it there is no perceptible whitening of the tree or foliage; and, further, in some places it may be found cheaper and easier to make than the lime emulsion. Its use is suggested as an alternative where good lime is unobtainable and also for making the emulsion when intended for ornamental trees, shrubs, etc., where the whitening of the foliage is objectionable. The flour emulsion can be added to Bordeaux mixture, Bordeaux and Paris green, if desired."

*Soap Washes.**

"The most effective soap wash is made with whale-oil soap, one pound to from four to six gallons of water. The term whale-oil soap is merely a trade name for fish-oil soap, made with either potash or soda. The potash soaps, which are the best, because even stronger solutions remain liquid when they cool, are soft soaps. The soda soaps are hard. Of the two, the potash soaps are considered the best to use on vegetation, as well as being more convenient. Both kinds should always be dissolved in hot water.

"When bought at retail prices, these soaps cost from 15 to 20 cents per pound, according to the locality, but if obtained in large quantities, can be got at from 3 to 5 cents per pound. Fifty-pound kegs are supplied at 5 cents per pound. Two well-known brands of potash soft soaps which have been much used in Canada, and have given good satisfaction, are those made by W. H. Owen, of Port Clinton, Ohio, and by Good & Co., of Philadelphia, Pa. If thought desirable, these soaps can be made at home; but it is very unpleasant and dirty work, and it is, besides, doubtful whether such good or cheap results can be secured as by buying from firms which make a special business of manufacturing soaps with only the required amount of moisture and the proper grade and amount of potash. It has been found in experiments carried on at Washington that what is required for spraying purposes is a caustic potash and fish-oil soap, made with a fairly good quality of fish-oil, and from which water has been elim-

*Central Experimental Farm, Ottawa, Bull. No. 52.