soap reduced to the consistency of thick paint with a solution of washing soda. If just enough carbolic acid is added to give it a strong smell it will be all the more repulsive to the beetles. This should be applied during the early part of June and again early in July when the beetles are most active in laying their eggs.

Spraying.—The whole host of leaf-eating insects which feed on the apple tree, such as the Tent caterpillar, Red-humped apple tree caterpillar, Yellow-necked apple tree caterpillar, Fall web worm, Tussock moth, canker worms, etc., must be fought with Paris green, used at the rate of 1 lb. to 250 gallons of water.

Other insects which suck the juices from the leaves and young wood, such as the aphis, tree cricket and bark louse, must be destroyed by the kerosene emulsion. This is made according to the following formula:—Hard soap ½ lb. (or soft soap about ½ gallon), hot water 1 gallon, coal oil 2 gallons.

Dissolve the soap in the hot water, add the coal oil, then agitate by means of a force pump or syringe for five or ten minutes until thoroughly mixed. If properly made, this, on cooling, will form a jelly-like substance, which, before being used, should be diluted with about fifteen parts of water.

The apple scab fungus, which affects the foliage as well as the fruit, must not be allowed to weaken the young trees before they come to a bearing age. To hold this in check, spray before the buds open with a solution made of 1 lb. of copper sulphate to 25 gallons of water; after the foliage appears, spray three or four times at intervals of ten days or two weeks with the Bordeaux mixture. This, as now used, is made according to the following formula: Copper sulphate (blue vitriol) 4 lbs., lime (fresh) 4 lbs., water 50 gallons or one coal oil barrel.

Dissolve the copper sulphate in a wooden vessel, or in the barrel on which the force pump is mounted. To do this quickly hang it in a little cotton bag so that it will be just below the surface of the water in the barrel. In another vessel slake the lime, using plenty of water, then strain it through a bit of coarse sacking into the barrel containing the copper sulphate. Fill the barrel with water.

If the lime is fresh and pure, it should neutralize all the acid in the copper sulphate solution. To test if this be the case, add to a small sample of the mixture a drop or two of ferrocyanide of potassium. If the lime is insufficient, this drop, when added, will turn brown. In that case lime-water must be added until the test gives no brown coloration.

The Bordeaux mixture and the Paris green may with advantage be applied together, thus forming a combined fungicide and insecticide. To do so add 4 ozs of Paris green to a barrel of the mixture.

All of these mixtures should be applied in the form of a very fine spray. The "Vermorel" and "McGowen" nozzles have so far been found to be the most effective and economical for this work. These may be attached to any good, strong force pump, of which a number of Canadian makes may be found advertised in the agricultural and horticultural journals.

O. A. C., Guelph. H. L. HUTT.