

- (5) Bordeaux mixture; this, while primarily a fungicide, has some good qualities as an insecticide. It is prepared thus: 1 lb. sulphate copper, dissolve in 1 gallon hot water in one vessel; in another, 1 lb. rock lime is slaked in 1 ½ gallons *cold* water, and when cool, pour into the copper solution and strain; add 2 gallons water, and it is ready for use. (Cook).
- (6) To this add London purple, 1 lb. to 200 gallons of the Bordeaux mixture. This sprayed over non-bearing grape vines or tomato vines not in bloom, etc., will prevent rot and insect life as well.
- (7) Soap: 1 lb. resin soap to 1 gallon hot water. This used as a spray is often a valuable remedy for the attacks of small and soft insects. In fact it can be used to advantage for soft scales, when they are few. It should be often used to get the best effect.
- (8) Water in which tar has been placed, acquires some value as an insecticide.

II. EMULSIONS. (Soap is used as the basis of most of these.)

- (1) Stronger emulsion of kerosene: 4 lbs. soap, dissolve in 1 gallon hot (boiling) water; remove from the fire and add 2 gallons kerosene while hot. Churn with a spray pump violently till the oil is emulsified, or on standing a minute and no free oil is visible, add 27 gallons cold water for use.
- (2) Weaker emulsion (Cook): 1 lb. soap, dissolve in 2 gallons hot water as before, but add only ½ gallon kerosene and dilute till 8 gallons solution are made. Adding ½ pint spirits turpentine to No. 1 increased its stability (Tracy). Allowing even 40 gallons of water to be added to one gallon of the emulsion and sprayed on tomato worms, it was very effective, and did not injure the plant in the least.
- (3) Emulsion 1: Adding 2 ozs. of balsam of fir with the kerosene, makes an emulsion that adheres better to the surface of leaves, and is slightly superior to No. 1 for the armored scales.
- (4) Using Emulsion 2, only substituting the same quantity crude carbolic acid for kerosene, is especially valuable for oak and pear insects.
- (5) The same formula, using oil of tansy or saffras 1 oz. in place of the ½ gallon kerosene, is efficacious for roaches, mites, ticks, bed-bugs and pests.

III. ARSENICAL, RESINOUS AND OTHER COMPOUNDS FOR SPRAYING.

- (1) To Kerosene Emulsion No. 1 add 1 oz. London purple and mix well. Highly recommended.
- (2) Resin Compound: Caustic soda, 1 lb.; resin, 8 lbs.; to make 32 gallons compound. Dissolve the soda in one gallon boiling water; take out half; add the resin slowly to the remainder and boil, stirring rapidly, when dissolved, add slowly the part taken out. Dilute till it will pass readily through a