

and Plant lice). Hard soap,  $\frac{1}{2}$  lb., or soft soap, 1 quart; boiling water (soft), 1 gallon; coal oil, 2 gallons. After dissolving the soap in the water, add the coal oil and stir well for 5 to 10 minutes. When properly mixed it will adhere to glass without oiliness. A syringe or pump will aid much in this work. In using, dilute with from 9 to 15 parts of water. Kerosene emulsion may be prepared with sour milk (1 gallon, and coal oil (2 gallons), no soap being required. This will not keep long.

11. TOBACCO DECOCTION—Refuse tobacco, 2 lbs.; water, 5 gallons. Boil the mixture for 30 minutes or more, until a dark brown tea-colored solution is obtained. Keep it covered until cool. It may then be used undiluted for spraying infected plants.

12. WHALE OIL SOAP—For Plant Lice: 1 lb. in 7 gallons hot water. For San Jose Scale in winter: 2 lbs. in 1 gallon hot water applied as the buds are swelling.

13. SOAP SOLUTION—For plant lice on house plants a 5c. cake of soap in 4 gallons water.

14. CRUDE PETROLEUM—(For San Jose Scale in early spring). A 20 per cent mechanical emulsion applied by a combination emulsion pump to invested trees just before the buds start. (To be done by an experienced person.)

14 (a). CRUDE PETROLEUM—WHALE OIL SOAP EMULSION... Recommended for San Jose Scale and other hibernating insects. Crude petroleum, 2 gallons; whale oil soap, 5 lbs. dissolved in  $1\frac{1}{2}$  gallons of boiling water. Churn thoroughly for 5 minutes or more, and add water to make 10 gallons.

15. WASH FOR BORERS—First, add soft soap to a saturated solution of washing soda to make a thick paint, then add 1 pint crude carbolic acid, and  $\frac{1}{2}$  lb. Paris green to 10 gallons of wash. To be applied to the trunks of apple and maple shade trees in early June.

16. LIME WASH—(For Oyster-shell Bark Lice, etc). Slake  $1\frac{1}{2}$  lbs. fresh lime in 1 gallon of water. Strain the wash before spraying. To be applied during winter to trees infested with oyster-shell bark lice.

17. FORMALIN—(a) For Potato Scab: 8 oz. or  $\frac{1}{2}$  pint in 15 gallons water. Soak seed potatoes in this solution for two hours. (b) For Smut in Oats and Wheat: 8 oz. or  $\frac{1}{2}$  pint in 5 gallons water. Sprinkle thoroughly the seed with this solution.

18. CARBON BISULPHIDE—(For Weevils in Peas and Grain). 1 lb. or 1 pint for every 100 bushels of grain, or 1,000 cubic feet of space. Liquid placed in shallow dishes on top of grain or peas.

#### Using Traceless Harness.

Innovations on old established ways of doing things necessarily proceed slowly. If we did not know this to be true it would be difficult to see why the hitching of teams to their loads without whiffletrees or traces by the Baker Traceless Harness advertised in our columns should not spring quickly into general use. This traceless harness has many things to commend it. We might instance a freer movement on the part of the team, saving in weight, simplicity in harness and hitching, short turning, getting closer to the load, comfort in hot weather, etc. It is particularly adapted to the plow, harrow, cultivator, scraper, log drawing, in fact all kinds of low-down work. The uninitiated might have misgivings of side draft, or added weight upon back or neck. The reverse is the case. It affords a straight square draft from the shoulder, without twisting. The great point of merit, however, lies in the doing away with the nuisance of swinging traces and whiffletrees, which

are so frequently the cause of annoyance, and giving free access behind and on both sides of each horse when hitched to load. To the fruit culturist its advantages are first apparent. Here it has been most widely adopted, and has a special use in the protection afforded trees shrubs and vines. But the advantages for many other farm purposes are almost as great. Any one interested should write the manufacturer at the address given in the advertisement for his circular, which sets forth the advantages in detail.

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