

DISINFECTANTS.

(FOR WOUNDS ON TREES AND FOR PRUNING-TOOLS USED FOR BLIGHT.)

Corrosive Sublimate, 1 part to 1,000 parts water. Best to get tablets at the drug-store; use tablets as recommended by the druggist, as they vary in size, one tablet to a pint of water being sufficient in some cases. In others three or four are necessary.

Corrosive sublimate is highly poisonous when taken internally. It corrodes metals and must be used in wooden or glass vessels.

Formalin (Formaldehyde) is useful in the disinfection of seed; e.g., against grain-smuts. Formalin should not be used as a disinfectant in fire-blight work.

SPRAYING MACHINERY.

The value of a spray outfit does not depend so much on the work it is capable of doing as on the competency of the man using it. Just as good work has been accomplished and results obtained with a barrel hand-pump as with a power-sprayer. Both good and poor work is being accomplished every year with all types, depending largely on the efficiency of the man in charge. With this in view it would be useless to go fully into the question of spray outfit and make any recommendations, as it is difficult to know who the reader will be. However, there are a few general principles with regard to their purchase which are worthy of mention.

In selecting an outfit the fruit-grower should not select his type from the standpoint of his present necessities, but should consider his requirements for the near future, during at least part of the lifetime of the outfit. It should be simple in construction (so it will not require the services of an expert mechanic to adjust it), strong, easily worked, easily cleaned, and one in which high pressure can be maintained. This latter point, though possibly not of any great importance as far as the majority of our orchard pests are concerned, is important, as it influences greatly the labour cost of spraying. Double pressure decreases considerably the time required for spraying, and it will be noticed in the cost of spraying as given below that labour is an important item.

Always wash out thoroughly and drain the spray outfit after using. This will save a lot of trouble and time.

Some essentials in a good spray outfit are:—

- (1.) The pump, etc., should be simple, strong, and easy to adjust.
- (2.) The pump should be lined with brass, or some material which will not be corroded or rusted by the spray mixture.
- (3.) The air-chamber should be of sufficient size to maintain a uniform pressure, and strong enough for high pressure.
- (4.) A good agitator is required, as the fungicidal and insecticidal value of most of our sprays is contained in the fine particles held in suspension in the water.
- (5.) A good strainer is necessary, especially where lime is used. The cone-shaped strainers have been found to be the most satisfactory.
- (6.) Good strong hose only should be used. The best is none too good.
- (7.) *Nozzles*.—Two types of nozzles are in common use and are giving good results—the Bordeaux type, which delivers a flat driving spray, and the Friend type, which delivers a circular spray. When spraying for codling-moth, or when winter spraying old trees with shaggy bark, bad crotches, etc., a high-pressure driving spray is best, and the Bordeaux nozzle is the one to use. For summer spraying when the chief object is to cover a large surface or on young trees with a smooth bark, the nozzles which deliver a circular spray, as the Friend, Bean Jumbo, etc., are the most economical ones to use.

It is well to have the nozzle on the rod at an angle of 45 degrees, as this greatly facilitates spraying.