



Fruit Growers who Took Part in the Discussions at the Important Convention of the B. C. Fruit Growers' Association, at Victoria, B.C.  
(See report page 39)

it is well to take out the machine and give these spots an application of the spray mixture. In spraying after the foliage has appeared, people are often misled by the advice that is given to cease spraying just before the leaves begin to drip. It is impossible to spray a large or medium-size tree thoroughly without a considerable amount of drip; hence the first rule to follow is: First, make sure that every leaf and fruit is covered; and, second, try to do this with as little material as possible. The number of trees which one barrel of spray will cover depends largely on their age and size, and also to a considerable extent on the man who is wielding the spray rod.

#### UNDERSTAND YOUR WORK

To spray intelligently, one should understand the life history of the more important insect and fungus pests. Unless a man knows exactly what he is trying to fight or prevent, he is apt to waste much time, labor and spraying material. Read some good bulletin on the subject.

Promptness is absolutely necessary. For those spraying applications which commence with the first signs of growth in the spring delay is fatal. In most cases at that time of the year, one might as well not spray at all as put it off for two, three, four days, or even more. The object of a fungicide is to prevent and not to cure. Practically all fungicides should be applied before the disease appears so as to prevent its lodg-

ment, and are successful only when they prevent infection. While this is not so true in the case of insects, it is important not to delay spraying for them, since when they are well established and more fully grown, they are very difficult to control.

Absolute thoroughness in all phases of the work is a third requirement. Many growers do their work in a half-hearted way and then complain of poor results. Every portion of the tree should be thoroughly moistened with a fine mist or spray in order that a uniform coating of the same may be left on the tree. The owner of the orchard, who, presumably, is the man most anxious to get good results from spraying, should not trust the work to ordinary labor, but he should do it himself or personally supervise it, unless he has very reliable help.

#### WHEN TO SPRAY

For old apple orchards that have never been sprayed, and for young orchards infested with oyster shell bark louse or San Jose Scale, spray before growth starts with commercial lime-sulphur diluted one to nine. This spray may be applied any time during the dormant season of the trees. Strain the concentrate through a fine mesh before using. This mixture acts as a general cleaning spray for old trees. The addition of a little milk of lime will cause the spray to show more clearly on the trees.

Give application number two of poisoned lime-sulphur or Bordeaux mixture when the leaf buds are swelling in the spring, for tent caterpillars, bud moths, cigar case borers and apple scab.

Give the same mixture again just before the blossoms open and after the cluster buds unfold. This application is for the scab and protects the young leaves and stems of the forming fruit. The poison is added for leaf eating insects.

Repeat the application once more when most of the blossoms have fallen and the little apples are still standing upright. Do not wait until the little apples have turned downward, as it is then too late. This is the first application for codling moth and is important in fighting the scab, as it is this application which gives clean fruit.

A fifth application composed of arsenate of lead two pounds, and water forty gallons, should be given a week to ten days later. If judged necessary, lime-sulphur may be used instead of water.

All five applications are not always necessary, and the grower must be guided in their use by the prevalence of insects and fungi and the character of the season. If only one application can be made, let it be number one. If only two can be made, use number one and two. If three can be made, use numbers one, two and four.