

## SPRAYING FOR INSECTS AFFECTING APPLE ORCHARDS IN NOVA SCOTIA.

Insect and fungous pests have increased in numbers during the past few years and will doubtless continue to do so in the future. To keep pace with this increase, new methods and materials are constantly being discovered and put into practice. Accordingly, as time goes on, the profits that will accrue to those who spray intelligently will continue to increase.

Only a short time ago one of the most successful orchardists in the Valley, on being told of a new pest said, "Let them come. When we get plenty of pests, the poor sprayers and non-sprayers will be driven out of the business and I shall be making more profits than ever." This grower's observation made in Nova Scotia from present conditions, is borne out by orchard experience elsewhere. In Ontario the good grower has made more profit from peaches since the advent of the San José Scale than ever before, and the same may be said regarding apples in the State of Illinois.

The history of the various fruit-growing districts in America is practically the same, wherever recorded. First, there is a period of clean orchards, few pests, good crops and good prices. Then there comes a period of heavy planting, with numerous pests introduced on nursery stock. These pests increase with the congestion of the orchards and, accordingly, there comes a period of lighter crops. Since, however, the aggregate production is greater, the price is forced down. This is followed by a period of heavy production with low prices, causing neglect of some orchards and no profits from those neglected, while the well-cared for orchards bear well and are profitable. The fourth period brings the elimination of the careless orchardist, together with larger profits than ever before to the grower who took proper care of his trees.

Here in Nova Scotia we are still in the third period of our existence as a fruit-producing region. In Nova Scotia, at the present time, large plantings are yearly coming into bearing and over periods of years we are producing large quantities of fruit. In most cases this fruit has been grown at a profit, but in almost every district orchards can be found that are not producing so barrels, but which, if properly cared for, should produce 1,000. Thirty years ago, such neglected orchards were possibly among the most heavy-bearing of the district. Insect pests and fungous diseases were not as common then as now. The pests increased, while the soil and cultivation in the orchards probably remained the same. The crop decreased in both quality and quantity as the years went on, while the neighbours who sprayed secured more and more apples every year. As a result of observing numerous orchards year after year throughout the Annapolis Valley, and by considering fully the value of fertilizing, cultivation and pruning, one is forced to acknowledge that thorough spraying is important to the health and production of an orchard than any or all factors combined. In other words, the success of the apple growers of the Annapolis Valley, both individually and collectively, depends more upon thorough and intelligent spraying than upon any other treatment they can give their orchards.

With a view to improving spraying methods and making sprays which seemed dangerous and defective, safe and profitable, spraying methods and materials have been studied carefully, and the spray calendar printed herewith, gives, in concise form, the best mixtures and methods as shown by the investigations of the writers.