



Lambton County's Great Display at the Recent Ontario Horticultural Exhibition

This exhibit comprized three hundred and fifty-two boxes of high grade, well colored fruit. It showed a map of the county boxes of wrapped fruit being used to outline the letters, border and lake.

services Mr. Smith very kindly offered to us.

To test whether insects could carry the disease at the blooming season, nearly two hundred blossoms were pollenized in the same careful manner that hybridists use when trying to produce new varieties of fruit. Pollen from four trees that I knew had been diseased the previous year was used on each tree. The two hundred blossoms were distributed over nine trees. Of the blossoms thus hybridized, eighty per cent, set fruit which remained on at least as long as the so-called June drop. A large proportion then dropped off, but some remained and reached maturity. None of these trees have this season shown any signs of disease.

In addition to the hybridizing, the blossoms on two other trees had nectar from diseased blossoms added to them. These trees also are still looking healthy.

#### RUBBING HEALTHY TREES

On August 13th four trees four years old were inoculated by rubbing several branches on each with diseased branches until the bark was ruptured. Again on September 9th, five more trees of equal age were inoculated in the same manner. On July 31st, leaves and fruit from diseased trees were gathered and crushed and a little water added to them. The juice thus formed was filtered carefully and three holes were made with a brace and small bit in each of four trees. The filtered juice was then poured into each of these and the hole covered over with grafting wax. This experiment was intended as a supplement to the rubbing, because, if in both cases the trees thus treated were to contract the disease, it would show that at least the sap contained the source of contagion, whereas

the rubbing alone would not make this so clear. No sign of disease has yet been seen on any of these trees.

#### PRUNING IMPLEMENTS

On May 3rd three trees were inoculated with a saw. In doing so branches were cut from diseased trees and brought to the healthy ones. Then a fresh cut was made in each of these and immediately after on several branches on the healthy trees. The cuts were made chiefly on the under side to prevent drying out rapidly. At this date the buds were swelling, but none of the blossoms had burst. On July 4th, four more trees were inoculated with the saw in a similar way. The trees are still healthy.

Careful records have been kept of all the trees treated in the above various ways and the results will be watched with much interest next season. I was not surprised that no positive results were obtained this year as I did not expect any from what I had learned of the disease, from observations and reading. Interesting results from some of these experiments may be expected next year, if the disease works in the same way here as in some states across the line.

#### WHEN DISEASE SPREADS

The second main subject of investigation was to determine when the diseases were spread. Fortunately the above experiments, intended primarily to show how the disease is spread, are equally well adapted to show when this takes place. For instance, if the trees on which the blossoms were hybridized with pollen from diseased trees develop the disease in a year or two and the untreated trees all around remain healthy, we can feel pretty certain not only that bees can distribute the disease, but also that

it spreads at least in blooming time. Again, if the trees pruned before the buds burst with an inoculated saw do not develop it we shall have some more data of value.

Our third subject of investigation was to determine how long a period elapses from the time a tree is inoculated until it shows the symptoms of the disease and what variation there is in the length of this period. This, I believe, is a very important matter, but fortunately once more nearly all the above experiments will help to give us data on it.

As these experiments begin to give definite results they will prepare the way for further investigations until finally we have succeeded in getting together a mass of reliable information that we hope will be of much service in the control of these dreaded diseases.

## A Use of Fertilizers Advocated

Chas. J. Fox South London, Ont.

In his article on commercial fertilizers, that appeared in the November issue of *The Canadian Horticulturist*, Dr. J. B. Dandeno states "he never yet met a man who could give a fair definition of plant food." Now, taking a commonsense view of the matter, I will give my definition. It is this: Plant food is any substance that is placed and worked into the soil that will cause it to produce a better crop both as to quantity and quality. Surely such an ingredient may be called a plant food.

If you can get enough stable manure no better plant food can be used, but many of our farmers fail to make enough. The market gardeners around our towns find it impossible to get all the manure they want, so they must, if they want to produce early vegetables, use a certain amount of fertilizers.

The Doctor says "half the amount spent for fertilizers in Canada is wasted." If this is so, it seems to me strange that the sale of it is increasing in Canada, and in many other countries, where men know the value of money as well as the value of fertilizers. The Doctor also says "you can carry in your vest pocket all the plant food that a load of manure contains." Let the Doctor next spring apply a load of good rotted manure on a plot of ground, then on another plot work in the contents of his vest pocket, and see which plot produces the best crop of corn, potatoes, or any other root crop.

For about forty years I have used fertilizers, and now in the city of London with only a half acre lot, I use every year four loads of stable manure and four hundred pounds of fertilizers, and I claim, by the use of the latter, I am enabled to produce very early vegetables. I also use it among my flowers.