

The Renovation of Old Neglected Orchards

R. S. Duncan, B.S.A., Port Hope, Ont., District Representative for Northumberland and Durham Counties



Spy Tree in Mr. Nickolls' Orchard Before Dehorning

In the spring of 1911, four orchards in the counties of Northumberland and Durham, which had been very badly neglected, were taken in hand for a period of three years to be treated according to the best orchard practices. The idea was to see whether the "old orchard" on the farm could be made to pay; if not, what would be the use of fruit men talking of rejuvenating the neglected orchards? The orchards were situated near the main road, where they could be under observation throughout the season, so that the results of the demonstration could be noted.

The orchards selected and which now have been managed for two years, were those of F. W. McConnell, Colborne, with one hundred and seventeen trees on a sandy loam soil; W. G. Noble's, Port Hope, one hundred and thirty-five trees on a clay loam soil; and Nathaniel Nickoll's, Welcome, seventy-two trees on clay loam soil. In West Durham we were forced to abandon the orchard of James Stanley, Bowmanville, owing to the C.P.R. running their line diagonally through the orchard. The orchard of W. H. Gibson, Newcastle, comprising one hundred and forty trees, was selected in the spring of 1912.

These orchards were planted some thirty or forty years ago, and had been utterly neglected as to pruning, cultivation, fertilization, and spraying—in

fact, they had never been sprayed, and hence the quality of the fruit was very inferior, the percentage of number one's varying from thirty to sixty per cent. Some of the orchards were "lousy" with oyster shell, bark louse, and the limbs were fast dying back owing to neglect.

Two of these orchards had been in sod and had never been ploughed for years. Manure was applied as a light dressing every few years, depending upon the supply.

The orchards were properly pruned, not very severely the first year, the operation being more a thinning out of the dead wood and a thinning out of the top. Cuts of one and one-half inches



The Same Tree After Dehorning

diameter and over were painted with white lead and raw linseed oil to assist in the healing of the wound and prevent the entrance of fungus spores which might cause decay and disease. The rough, loose, shelly bark was scraped off the trees to facilitate spraying operations.

The orchards were measured at the rate of ten to twelve loads of farmyard manure per acre, in one instance the manure being supplemented with commercial fertilizer.

In Mr. F. W. McConnell's orchard, Colborne, we suggested that two hundred pounds muriate of potash and four hundred pounds acid phosphate be applied per acre. The fertilizer respond-

ed on this light soil, and together with the nitrogen in the manure we got a good wood growth, which was quite lacking.

All the orchards were ploughed early in the spring, and received thorough cultivation up to the end of June when a cover crop of red clover, at the rate of twenty pounds per acre, was sown in Mr. McConnell's orchard; red clover in half of Mr. Noble's orchard at twenty pounds per acre, and hairy vetch in the other half at the rate of thirty pounds per acre; and a mixture of red clover, alsike, timothy, and oats in Mr. Nickoll's orchard. All the cover crops made a fairly good growth—the red clover probably giving the best results.

The orchards were sprayed very thoroughly three times as follows: First, before or as the leaf buds burst, with commercial lime-sulphur, one to ten, to control oyster shell, bark louse, and leaf blister mite. Second, just before the blossoms opened or as pink was beginning to show in the leaves, with commercial lime-sulphur, one to thirty-five, with two pounds arsenate of lead added as a poison for forty gallons of the mixture. This is to control apple scab, caterpillars, case bearers, cankerworms, bud moths, etc. Third, immediately after the blossoms fell with commercial lime-sulphur, one to forty, with two pounds arsenate of lead added per forty



A Spy Tree Three Months After Severe Dehorning