

FARM AND DAIRY



& RURAL HOME

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75th Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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Spraying Results in Neglected Orchards

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

IN view of the fact that so many of the old orchards in the province of Ontario were being seriously neglected, a campaign for better orchard management was commenced in the spring of 1911 in the counties of Northumberland and Durham. Four demonstration orchards, one each at Colborne, Cobourg, Port Hope, and Newcastle, 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 orchards were situated near the main road where they could be under observation by passers-by throughout the season so that the results of the demonstrations could be noted.

CONDITION OF ORCHARDS IN 1911

These orchards had been planted some 30 or 40 years, but had been almost totally neglected as to pruning, cultivation, fertilization, and spraying. They had never been sprayed, and hence the quality of the fruit was of a very low grade—the percentage of No. 1's varying from 30 to 60 per cent. They were full of bark lice

the lower branches, and thus economize in picking. In 1913 a lot of small twigs and branches were cut out to open up the trees, thus giving the fruit a better chance to color.

All cuts of one and one-half inches in diameter and over were given a coat of white lead and oil. The rough, loose, shelly bark was scraped off the trees to facilitate spraying operations. The orchards were all manured each year at the rate of 10 to 12 tons of farmyard manure per acre. In two orchards the manure was supplemented by an application of 200 lbs. of muriate of potash and 400 lbs. of acid phosphate per acre.

The orchards were plowed in each year as early in the spring as it was possible to get on the land, and then they received thorough cultivation up to the middle of June, when a cover crop of red clover, buckwheat, or hairy vetch was sown.

The orchards were sprayed very thoroughly three times each year as follows:

First, before or as the leaf bud bursts with



A Result of Good Methods

case breakers, canker worms, bud moths, etc.

Third, immediately after the blossoms fell with commercial lime-sulphur, one to 40 with two pounds arsenate of lead added per 40 gallons mixture to control codling moth and apple scab.

In spraying we used a double acting hand pump and a tank, a home-made affair, holding 200 gallons, with a tower attachment for reaching tall trees. We used two lines of hose and two angle nozzles of the "Friend" type on each line of hose. One man was on the tower equipped with 15 feet of hose and a rod eight feet long; the other man being on the ground with 30 feet of hose and a 10 foot bamboo rod. Two men acted as power on the pump, giving a pressure of from 100 to 150 lbs. All solutions were strained into the tank. The arsenate of lead was first brought into suspension before being strained into the spray tank. We always endeavored to spray with the wind and do as much of the trees as possible.

THE RESULTS

Accurate account has been kept of all expenses pertaining to each orchard in each of the three years. All labor, with the exception of pruning which is valued at two dollars a day, was calculated on the basis of \$1.50 a day per man, and a man and team at \$3 a day. Farmyard manure was valued at \$1 a ton. These figures, it will be agreed, were quite reasonable.

In figuring out the results, no allowance was made for rental of land, as it was difficult to arrive at a fair valuation of the orchard; it differs in different localities. No account was taken of the interest on the investment or overhead charges, nor depreciation in value of the implements used.

I append herewith a tabulated statement of the expenses and receipts for the orchard of Mr. F.



A Demonstration in a Neglected Orchard that has Since Yielded Splendid Returns

The orchard of F. W. McConnell, Northumberland Co., Ont., in which this group of farmers and fruit growers gathered to learn something of the doctrine of better fruit, yielded a net profit of \$25 an acre after it came into the hands of the district representative, who conducted it as a demonstration orchard. Similar satisfactory results were achieved in other neglected and unprofitable orchards by the application of the same methods. Mr. R. S. Duncan, who had the work in hand, tells of how the results were achieved in the article adjoining.

TREATMENT

The orchards were pruned in 1911, not very severely, but more of a cutting out of the dead wood and a thinning out of the top. In 1912 the greater number of the high trees were "dehorned," as much as 12 feet being taken off. Our object in doing this was to make a more spreading tree, have the fruit borne on

commercial lime-sulphur, one to 10 to control oyster shell bark louse and leaf blister mite.

Second, just before the blossoms opened with commercial lime-sulphur, one to 35 with two pounds of arsenate of lead added per 40 gallons of mixture to control apple scab, caterpillars,