

more you will see the truth of my discovery, and the more apparent it will be that high moral principle is the first requisite for the fruit business; and it is much to the credit of the noble body of men now engaged in the business that matters are not worse than they are, that occasionally the fruit at the bottom of a basket is not much worse than at the top, and that sometimes there are no wormy or bruised apples at the bottom of a barrel.

What, then, should be done to remedy this state of affairs? Firstly, gentlemen, let us be thankful that this discovery has been made; now that we know the real cause we can take measures for its prevention and cure. Secondly, a board should be appointed by the Government, selected from our highest and most moral citizens, to award certificates of moral character to anyone about to engage in handling fruit or fruit stock. Thirdly, no one should be allowed to engage in growing or selling fruit or fruit stock without such a certificate. Fourthly, the writer should be president of the board at a handsome salary. Fifthly, no fruit package should be left alone for any considerable period. By the adoption of these measures we can, in time, attain to perfect honesty; and, instead of its being a matter of surprise for a private purchaser to receive an honest basket of fruit, it will be the most ordinary, every-day occurrence.

OBSERVATIONS ON RUSSIAN FRUITS AT THE CENTRAL EXPERIMENTAL FARM, 1898.

By W. T. MACOUN, HORTICULTURIST, CENTRAL EXPERIMENTAL FARM, OTTAWA.

It is a great pleasure for me to be with you this morning. It is the first time that I have had the pleasure of attending a meeting of the Ontario Fruit Growers' Association. Knowing as I do full well the high esteem in which you held Mr. Craig, the late Horticulturist of the Farm, I feel that without your sympathy and co-operation the work that I may do there will not be such as if I felt you were all my friends.

Before giving my observations on Russian fruits for 1898, let me relate the history of these fruits as grown at the Central Experimental Farm, Ottawa.

A large number of Russian fruits have now been tested for ten years at the Central Experimental Farm. In the year 1888 there were planted in the orchards 133 supposed varieties of apples, twenty-eight of pears, eight of plums, and thirty-eight of cherries. Since that time others have been added at intervals, and notwithstanding those that have been winter-killed, there are now about 160 supposed varieties of apples in the orchard, eighteen of pears, twenty-eight of cherries, and seven of plums. A few of the apple trees planted in 1888 fruited in 1890. The trees did well and made vigorous growth up to the year 1892, when blight appeared in the pear orchard and continued to spread throughout the summer and autumn, notwithstanding all efforts to hold it in check. All the Russian varieties of pears were affected, twenty-five trees being killed to the ground. The apples were also affected that year, though not so seriously. In 1893 the disease appeared earlier in the season and committed great ravages, both among the apples and the pears. Many apple trees were reduced to stubs, while the pears were still more badly injured than in 1892. This left these orchards in a very dilapidated condition. Some trees had died altogether, others were reduced to stumps, and again others which had large diseased limbs sawn off, had lost their symmetry. The trees were not so much affected in 1894 and 1895, but owing to the severity of the winter of 1895-6 a large number were root-killed; the last of the pear trees originally planted going at that time. Further injury from root-killing occurred in the winter of 1896-7. During the past two seasons, most of the apples and pears which have been replaced, made good growth, and some of the apple trees which were badly affected by blight are regaining symmetrical proportions. Out of about 288 apple trees planted in 1888, there are now 149 trees living, 139 having died, of which 104 died in the spring of 1896, twenty-seven in the spring of 1897, and eight this year.

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