

APPENDIX No. 1

posted up in all the post offices in Nova Scotia, where it attracted public attention, and was examined by many who might not otherwise have seen it. I saw it in some post offices in Nova Scotia last winter; and I brought it before the Fruit Growers Association of Nova Scotia at their annual meeting, as an example of what one man can do to benefit a whole district. Mr. Blanchard gives concisely on this card the nature of the disease and the remedies.

By Mr. McGowan:

Q. What are the remedies he proposes ?

A. It would not take many minutes to read the whole thing.

"MUNICIPALITY OF VICTORIA, NOVA SCOTIA."

To the Fruit Growers of Victoria.

I am requested by the Warden to send you for your consideration the following facts gathered from the most authoritative sources, in reference to Black Knot.

It was believed by early writers on this subject that Black Knot was caused by insects, but this erroneous belief has been clearly disproved.

Prof. Halstead says :—'There is no question whatever about Black Knot being caused by a low form of vegetable growth classed with fungi, which sends its minute threads through the substance of the twigs and branches.'

The beginnings of a young knot are manifested by the swelling and then cracking of the bark ; and, in the cracks thus formed, the threads of the fungus come to the surface and clothe it with a covering of olive filaments bearing multitudes of spores. These spores when ripe are carried in the early summer in all directions by the wind, and, falling upon the surface of plum branches, germinate, and send their filaments or roots through the bark into the growing ring of soft wood beneath and form another knot.

As the season advances the knots turn black, throw out another set of seed spores which carried by the wind, start in the fall another crop to grow throughout the winter, of Black Knot wherever on the bark they alight. These seed spores, so small as to be invisible to the eye travel on the wind and may do injury to a plum orchard miles distant.

Thus it is seen :—

That the seed spores are sown twice and possibly four times a year ;

That the knot grows during the winter as well as summer ;

That the disease has a foot hold on the bark before the spores are visible ;

That one infested tree will scatter contagion throughout the settlement.

That one careless plum grower may do irreparable mischief to the whole community ;

That only by ignorance of these proven facts will a *good man* injure his neighbour.

Remedies.—Remove every knot whosoever tree it is on, as soon as it makes its appearance. Rather than leave it, break off the knot by seizing and twisting it with the thumb and forefinger of one hand, holding the bough in the other hand.

To make a clean job cut the limb off four inches below the knot. Where the enlargement of the limb would render this wasteful, thoroughly pare off the diseased part, and smear the wound with paint in which is mixed turpentine and kerosene. As the seed spores will ripen on a severed limb, in all cases destroy the knot by fire.

He then speaks of the result secured by spraying with a solution of caustic potash all his trees. The efficacy of that is not so well proven as the cutting out. What he says is :—

The most advanced method and as practised by W. C. Archibald, Earnscliffe Gardens, is to spray the trees once in the fall, and once in the spring, just before the leaves start, with a solution of caustic potash. This is not Gillett's lye, or soap lye. This mixture must not be used except after the leaves have fallen as it will injure the foliage. The intention by fall spraying, is to promote general cleanliness from all parasites and especially to kill the invisible seed spores that have in the summer or autumn dropped the embryonic black knot on the plum bark or buds ; and, by the spring spraying, to damage the winter crop of spores before they ripen and disseminate their early seed. Good cultivation and feeding of the soil is also a prime factor in obtaining success.

NOTE.—Similar treatment of the apple trees with this caustic potash, is excellent for the destruction of bark-louse and parasitic fungi. Caustic potash is worth in bulk about ten cents per pound.