

The Canadian Horticulturist

Vol. XXIX

JUNE, 1906

No. 6

Bearing vs. Non-Bearing Wood for Propagation

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FOR several years trouble has been experienced by many orchardists because their fruit trees fail to set good crops of fruit, and even in the case of a light crop, they may have a failure as to color and quality. The Northern Spy is, perhaps, the most common example of this. In most cases it fails to bear for 15 or 20 years, and then only responds with light crops of overgrown, colorless, punky specimens, without keeping quality. Other trees, and sometimes parts of Spy orchards, frequently come into bearing at six or eight years of age and bear regularly from that time on, producing medium-sized, sound, well-colored fruit, of excellent keeping quality. Some orchards of Spy trees have been procured, part from one nursery, and part from another, and after coming to maturity have presented these two extremes of bearing qualities, thus presenting a problem to the grower as to the cause of this great variation. Nevertheless, with the light of recent developments in the science of propagation, the solving of this problem is not such a difficult task.

Experiments have shown that in top working young trees with scions taken from Spy trees of the heavy bearing type, crops of good, sound, highly-colored fruit have been produced in a very few years, and the trees have continued to bear regularly. This clearly indicates the source of the trouble with these non-bearing orchards. The practice of so many nurserymen in propagating their trees from block to block in the nursery, taking the wood from the older blocks and grafting or budding the young trees year after year, probably in some cases without a break for 20, 30, 40, and even 50 years, is nothing more nor less than a perfect method of breeding non-bearing trees.

It must be patent to the ordinary observer that this is the source of the trouble. Not only is this tendency developed in the Spy apple, but, also, in all the moderate bearing varieties, such as Baldwin, Greening, Russet, and others. It is also true with the moderate bearing varieties of plums, peaches, pears, cherries, and even currants, especially the good old Black Naples, all of which come from the same source. The Black

Naples currant is perhaps the most notable example of this. The country has been flooded with plantations of great, strong growing, barren plants of this variety, and after being cared for by years of patient toil, they have been found to be useless and had to be destroyed. Here and there, however, plantations of this variety are to be seen showing variations in productiveness, all the way from prodigious to medium, poor crops, and perfect failures.

The source of this, too, is not hard to find. This splendid variety when first disseminated was in great demand, on

To the Forefront

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account of its all round excellent qualities and was procured at high prices, but in limited quantities, by the leading nurserymen. These were planted out in rank growing soil for propagating purposes only. These plants are known as stools, and the wood is cut off from year to year near the ground, so close that no fruit can be borne. This permits the energies of the bush to be expended in wood growing only. Wood is cut in this way from year to year, continuing in some cases for many years and the wood used for propagation.

Is it any wonder that we have the present conditions from such methods? Let us look at it more definitely. Is it not reasonable to conclude that these stools would naturally produce plantations less and less productive until entirely run out? Further, if these various plantations are the source of propagation of other plantations, would they not produce the same degree of unproductiveness as they themselves

show? It was the writer's experience, several years ago, to have to purchase 1,000 Black Naples bushes from a reliable United States firm. They were guaranteed true to name, or money refunded. These plants were used to fill orders from growers. In due time they returned and demanded the refund of their money, as they all turned out to be this same worthless, non-bearing stock. Of course we were compelled to pony up, but on application to the producer, the head of the firm replied that this could not be, as he bought the original stocks from the introducer and had ever since propagated from the original stools. Since they were used exclusively for wood production, they must be true to name, but I was just as convinced that they were as untrue to the original type as possible. Another nurseryman told me he cut 20,000 cuttings from a row 20 rods long. We must conclude that this is an easy way to get wood for propagation, but to the grower, an impossible way to get fruit.

Would it not be well that a series of experiments be entered into and conducted by the Ontario Government with a view to the final and definite solving of the problem in its minutest detail? We do not think that the nurserymen are entirely to blame. Trees grown for years in succession from wood procured from nursery blocks, are much straighter and thriftier than those produced from scions taken from heavy bearing trees of the original type, and in nine cases out of 10 the grower will select the straight trees grown from the nursery wood and refuse the less thrifty looking trees, produced from wood off bearing trees. There is little encouragement for the nurserymen to take the proper course. Millions of dollars would be saved to Canadian fruit growers by a complete change of methods.

In the Ozarks region of Missouri and Arkansas if apples fail to bear at four or five years of age the foremost growers are resorting to the method of girdling the trees in June when the sap is thickening. A strip of bark two inches wide is peeled from the trees, girdling them just below the branches where it is most shaded from the sun. In 10 days or so