

wood towards the centre of the tree. Having this form, it is impossible to spray economically, not only on account of the height of the bearing wood, but because the interlacing branches prevent the spraying apparatus from passing easily from tree to tree.

RENOVATING OLD ORCHARDS

The question is frequently asked whether these old orchards can be renovated. In many cases they can. Where the trunk and limbs of the tree are sound there is no reason why a new growth should not be started on the lower portions of the limbs. This new growth can be induced by cutting back the ends of the lower limbs along with the thinning of the finer brush towards the outside of the tree. This would, of course, temporarily reduce the bearing area somewhat; nevertheless, the result in the end would be beneficial. The bearing area is seldom too large, but it is unevenly distributed over the whole tree. Usually, in these old trees, it is confined to the tips of the limbs where the fruit spurs are much too crowded. The effect of thinning the finer brush, and cutting back the larger limbs moderately, would be to induce the growth of suckers or water sprouts on the naked limbs towards the centre. One or more of these may be selected on each limb, and so pruned as to fill up the vacant space in the centre of the tree.

These water sprouts usually grow very vigorously the first year. A growth of three or four feet is not unusual. The spring of the second year, the new growth that best suited the purpose of filling the vacant space, should be selected, and all others cut off close to the main limb. One year old shoots left should be pruned back to within four or five inches from the main limb. This would induce nearly all the buds upon this remaining stub to grow. Three or four of these would be selected and the remainder pinched out soon after growth began. By the end of the season the shoots left would usually make a growth, not as vigorous as the growth of the preceding year but still more vigorous than they would from the older branches. These again should be cut the following spring to the extent of one-half their growth. It is quite possible that, after this treatment, fruit spurs will form on these side shoots, the end buds developing into wood growth. This wood growth should again be thinned to two or more shoots as the case may require, and cut back slightly the third season. The third season fruit spurs will develop on the one year old wood, and after this very little cutting back will be needed.

If the original sprouts have been judiciously selected, you have three years af-

terwards the centre of the tree fairly well filled with bearing wood. During this time the outside of the tree has been carefully thinned, but some bearing wood would have developed, and if this is pruned to correspond with the new wood induced in the centre of the tree, you have now a good bearing tree ready to renew its youth, the younger wood growing from the centre taking the place of the older wood towards the outside.

BAD NURSERY STOCK

In the young orchards it can be seen very distinctly that the farmers are not well informed in the quality of the stock. In one case I saw an orchard of twelve or fifteen acres in extent planted with trees which must have been stunted stock, six or seven years old, severely cut back in the nursery, and making a very poor showing after being planted a year in their permanent position in the orchard.

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Raspberries in Dry Seasons

During seasons of drought, fruit trees and bushes often fail to give satisfactory results. To know how to care for them properly at such times would mean money in the pockets of the growers. The past two seasons were particularly dry in some of the fruit sections of the state of Michigan. During a visit to Toronto, Mr. A. W. Twiner of Sagatuck, Mich., called at the offices of THE CANADIAN HORTICULTURIST and told how he has grown raspberries successfully during dry seasons when others failed.

He grows his plants three feet apart in rows that are six feet apart. Instead of allowing the canes to grow in clumps, he throws the entire energy of the clump into one, two or three plants, usually only one. These are grown in tree form, by pinching back in summer to three feet high to induce the formation of lateral branches. For the following season, the strongest shoots are allowed to grow.

Early in spring, the soil is plowed about three inches deep toward the plants. Cultivation between the rows is carried on all season. The following spring, the earth is hoed away from the plants and cultivation is continued so as to maintain a dust mulch for the conservation of soil moisture. This system is repeated regularly.

One "Boy's Delight" apple tree given for one new subscription to THE CANADIAN HORTICULTURIST. See our premium offer.

Much of the small, imperfect, light-colored or wormy fruit comes from trees not growing under favorable conditions.

Canadian Plums

W. T. Macoun, Ottawa

Only a few domestic plum seedlings have come into prominence in Canada for the same reason mainly as with the pear, the tenderness of the fruit buds limiting the area also in which they may be grown successfully. Two Canadian varieties which are sold by nurserymen are the Glass and Kingston, the following descriptions of which are taken from "The Fruits of Ontario":

KINGSTON

"Kingston is a valuable market variety. Origin, province of Ontario; tree, vigorous and productive; fruit, medium to large, oval; color, dark purple, with thin blue bloom; stem, slender, about five-eighths of an inch long, inserted in a small, deep cavity; suture, shallow; apex, a small point; flesh, yellowish-green; flavor, tart; quality, cooking, good; season, early September."

GLASS SEEDLING

"Glass is a commercial variety resembling Quackenboss. Origin, with Alexander Glass, at Guelph, Ont.; tree, hardy, vigorous, upright, foliage peculiar dark green; productive; class, *P. domestica*; fruit, large, round oval, irregular at apex; suture, distinct; apex, depressed; stem, three-quarters to one inch long; color, dark purple with thin blue bloom and white dots; skin, thick, firm; flesh, free from pit; color, greenish-yellow; texture, juicy; flavor, sweet and agreeable; quality, dessert fair, cooking good; value, market good; season, September."

NEW PLUMS IN QUEBEC

On the island of Montreal in the province of Quebec, where domestic plums probably have been grown for nearly three centuries, many seedlings have originated, some of which are distinctly hardier in fruit bud than those usually listed. Three of the best of these are Raynes, Mount Royal, and Lunn. Descriptions of these plums will be published in the complete list.

Work is being carried on at the Central Experimental Farm in the improvement of the *nigra* and *Americana* plums and already several seedlings have been named.

In my bush fruit patch, I remove the old wood in fall after the fruit is picked. The tops also are cut off. This practice kills the insects on the old wood. By cutting the tops off the new wood, breaking is lessened.—Jos. E. Culp, Jordan, Ont.

The Salome apple should be planted more extensively. It is a splendid keeper and retains its flavor longer than most varieties. The tree is a vigorous grower and produces good crops.—D. J. Gibson, Newcastle, Ont.