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*Nec arancorum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes.*

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ON NURSERIES AND ORCHARDS.

BY C. L. HATHEWAY.

Every Farmer commencing farming operations upon his own farm, should be sensible of the great value and comfort of a good orchard, and prepare for it, according to the extent and value of the farm, and other local circumstances.

It should be borne in mind that the soil is best, and that trees of most kinds generally thrive best, on the north side of a hill, but it must also be remembered that trees, as well as other vegetation, thrive best when sheltered from the hard winds.

Many have planted their nurseries in a small space, very thickly together, so that a single tree cannot be taken up without injury to its own roots and the roots of others—a difficulty which I have seen most effectually remedied by planting singly in a larger space, about three feet apart.

Let the farmer carefully select his plot for the orchard, and plant his seeds in the whole apple or core in the autumn, so as to have the seeds cracked by the frost, and to ensure their sprouting the ensuing spring; otherwise they may remain dormant until the ensuing year.

Let the hills be about the same distance and planted much in the same manner as corn or potatoes, and let them be hoed and weeded through the summer with great care.

From these hills, or from an apple core, more sprouts may arise than will be useful; but about the latter part of July or the first of August all the extra shoots should be pressed down and buried, or covered over with earth, forming a little hill round the most flourishing, which should be left to remain. The same care should be continued annually until it is time, or they are large enough, for transplanting, when they should have a space of twenty feet apart, leaving the original nursery as the first nook of the orchard.

No animals should be allowed to run among them till they have acquired enough size and strength to resist their attacks, and have their limbs above their reach, and then on some occasions sheep or swine may be pastured among them to advantage.

Fruit trees, and even forest trees, deteriorate the soil and require a vegetable or other manure, to repair the waste. This we see in the native forest, while the trees are small they stand very thick and close together, but as they grow larger the smaller trees die and rot to supply manure for the surviving ones, which occupy a larger space in proportion to their age;—and experience proves that the same principle should be attended to with respect to orchards.

Thus it is observable in many orchards where the land has not been regularly manured in some way or other, or where it has once deteriorated by improper tillage, that the old trees wither, and have not sufficient vigor to overcome such accidents as occasionally occur. When orchards are annually mowed until the meadow is very poor and yields a small crop, the trees also wither and bear little fruit.

Orchards may be benefited in various ways—by manuring—by feeding sheep or swine among the trees—by laying round them old vegetable matter of any kind—by placing dead bushes to rot about their roots—rotten wood, saw-dust, flat stones, &c.

Fruit trees have been known to thrive well when the land is too full of rocks and ledges to be cultivated, but they generally thrive best in old gardens, where the soil has been highly cultivated—on dead alluvial soils—or such soils as have proved the most congenial to the native oak, rock-maple, or butternut.

I have long known two apple-trees to stand in an interval garden, which bear a sufficient quantity of good apples for the use of the family. One of the trees which I think has not failed in bearing annually

for the last fifty years—has produced more than twenty bushels in one year. This garden was annually manured and cultivated with root crops and vegetables. Other trees upon the same kind of soil, and of greater age, continue to bear quantities of fruit.

I have seen abundant proof of the evil effects of neglecting to prune the trees and cultivate the soil, as well with the Damsion plum, the English cherry, as with apple trees.

The first symptoms of decay may be the rising of a black knot, or a dry limb near the top, with a thick cluster of shoots springing out of the trunk near the ground—all of which require immediate attention, investigation and care.

The remedies to be applied are the pruning knife or fine saw, and then manure, with a covering of the top of the earth near the root of the tree, to prevent the grass or weeds growing near the trunk.

In pruning young trees which should never be neglected in the nursery—great care should be taken in judging of those limbs which should be taken off, and the stalk that is thickest and strongest should frequently be preferred to the tallest.

When the main shoot is very tall and slender, it may be topped off a little in July so prevent more of it being killed by the frost next winter; and when the top divides into two shoots of nearly equal size, separating at an acute angle, one should be cut, otherwise they are apt to split apart when they become larger, carrying death and destruction to the heart of the tree.

Strong prejudices have prevailed in this Province against the quality of the fruit, and it is imagined by some that our apples can never be equal in size and flavor to those of other countries; but the facts are established that we do raise some large apples and, some of excellent quality; and the only reason why there are so many of an inferior quality, is the almost total neglect of selecting and ingrafting from superior kinds.

Ingrafting may be done to the small trees in the nursery with excellent effect, and with a certainty of procuring the same kind of fruit as the tree produced from which the scion was taken; and ingrafting should never be neglected in the old orchard, or upon old trees, when we have already ascertained that the fruit is not of the right kind. Ingrafted trees flourish with the same care and management that other trees require.

An apple-tree bearing on one side a beautiful yellow fruit, another side a lively green, with some limbs producing apples of a brilliant red color, and all of a good flavor, must certainly be more admired than the finest flower-pot which any lady can exhibit, and must be esteemed more truly valuable.

Now, it is ascertained that this can be done, and farmers who do not lay a foundation for good fruit, neglect an important duty and privilege.

It is true that we may plant the seed of a sweet apple and raise a tree that will produce sour fruit, but when we raise a scion from a good tree, we are sure to have good fruit.

I have ingrafted, by way of experiment, several kinds of trees, but not with effect, excepting the apple tree, which leads me to view the kindness of Providence in intending that beautiful tree to be made subservient to the use and taste of man. I have ingrafted at various seasons, but never with effect, except in April or May. That much inconvenience is experienced in some situations at times, for want of scions from good trees for engrafting, is certain, but this must be chiefly attributable to a want of care and forethought. The scions may be taken any time in the winter, and kept in earth in the cellar until after the hard frosts of April.

There appears to be a peculiar apathy among many farmers of this Province in the cultivation of fruit trees, and many objections are raised, or excuses made, which when traced to their origin, should not have weight. Some affirm that in other countries—in the United States, and even in Nova Scotia—apples flourish in the woods, and on the commons or highway, without care. They do so in some instan-

ces, but they are generally unproductive or of a bad description.

But in Nova Scotia great pains has been taken within the last twenty years to improve the quality of their fruit, and with good effect; and in the United States the cultivation and improvement of fruit trees has long been practised and studied as an important science.

As an encouragement to the young, the middle-aged, and even the aged, to plant and raise fruit-trees, I will just mention the following incident. In the year 1820, in a remote neighborhood of King's County, an old couple related to me the following incident:

The old man had been eating a very good apple, and declared his intention of planting the seed, while the sapient old wife laughed at the idea, as there appeared to her no probability of his ever eating of the fruit of it. He, however, planted the seed, which produced a tree bearing apples of an excellent flavor, which they thought similar to the original, and of which they had already eaten.

In 1844, being in that neighborhood, I again inquired for the old couple, and still able to eat apples; and in 1850, it was announced in the Journals of the House of Assembly that the old woman, still living, had obtained a pension as the widow of an old soldier.

It may be seldom that we meet with such frequent instances of longevity and success; but apple-trees are known sometimes to bear in five years after planting, and grafts in two years after grafting.

When the bark of the apple tree is piled by the extension of the tree perpendicularly, the plum and cherry are each bound by a bark running horizontally round the tree, similar to the bark of the birch; and as trees are frequently injured by the binding of the soil or sod covering their roots, so the plum and cherry trees are more particularly liable than the apple tree to be bound by the bark which generally causes knots, protuberances, distortions, and decay of the trunk. To prevent this a slight cut with a knife through the outer bark, in a perpendicular line down the north side of the tree from the limbs to the ground, gives immediate relief, and causes a rapid extension of the tree in that part.

If cutting should have to be repeated, it had better be performed either on the east or west side, and it is very useful to shave off all the external rough or dead bark from all fruit trees. I feel satisfied that this practice not only prevents the great and general decay of plum trees, but causes them to flourish and grow with increased vigor and abundance.

Fruit trees are not free from the influence of bad seasons or late frosts in May or June; but I am fully convinced from my own observation and experience, that it is rather owing to prejudice and neglect than to climate or soil, that our markets are not well supplied with good fruit of our own raising.

If, in selecting the plot for the orchard, the farmer cannot conveniently select a place of natural shelter from the violence of the winds, let him at first secure his nursery with a board fence, and then plant trees for shelter at the four corners, and at a convenient distance from his plot.

In this country more of the manure of the farm goes to enrich ornamental trees, or those occasionally left or planted for shade, than is applied to the benefit of fruit trees.

I have, often regretted, when I beheld the lounging willows about the farm yards, with the towering poplars, revelling in luxuriance, and feeding on the ammonia and other auriform gasses which escape from a neglected barn yard, that they were not exchanged for the blossoming fruit trees. How many valuable trees might be flourishing and profitable to the owner in the little waste nooks and corners of the fields and farm yards. Of all the verdure beautifying the rural scene, I think that which is mingled with blossoms promising fruit, the most beautiful.

Few thriving farmers who have witnessed the comfort of a good orchard, will allow their fruit trees to be neglected; but in many cases it is evident that the successor of the original planter is too often unacquainted with the care and cultivation ne-

cessary to maintain his trees useful and productive.

It is an established principle in all agricultural operations, that those plants or trees which produce the most palatable, nutritious and abundant fruit, require from the soil an abundance of fertilizing and stimulating substance; and when these are wanting little benefit or excellence may be expected.

A field that is in a suitable condition to make a rich durable English meadow, is likely to produce good thrifty fruit trees also, if they are planted and cultivated in it.

The above observations are from the practical experience of the author.

From the same.

## REPORT OF COMMITTEE CONCERNING THE PRINCIPLES OF BREEDING.

The breeders of domestic stock should never forget the adage of the celebrated Bakewell—"That like produces like,"—that the defects of the parents are just as surely transmitted to their offspring as their good qualities; and as regards the horse—blindness, broken wind, spavin, curbs, ring-bone and founder, are all hereditary; and though these blemishes may not appear in the immediate progeny, they frequently appear in the next generation.

Breeders, therefore, should make it a rule, 1st, to breed from none but sound and healthy parents, and such as are free from all natural infirmities of structure, temper or disposition; 2d, to breed from the most perfect in form, and to take especial care that a tendency to the same defect does not exist in both parents; 3d, to breed from animals of a distinct and positive character and to take care that the male and female are so assorted as to ensure a certain description of offspring.

The first and second of these rules are sufficiently plain—the third may want some explanation. By the first clause it is meant to be understood that only animals of a pure and distinct class, such as the Clydesdale, the Suffolk, the Cleveland and the Canadian, among horses; the Ayrshire, the Durham, the Exeter, and the Hereford, among cattle; and the Cheviot, the Southdown, and the Leicester, among sheep; can be applied with propriety, and that crosses of all sorts on the side of the male should be strictly avoided; and by the second clause, that animals put to breed should bear a resemblance to each other as regards form, weight, &c.

That an English dray-horse, put to the small mares of this Province, or a large short-horned bull to the cows, would be almost sure to end in disappointment to the breeder.

Another thing to be borne in mind by the breeders of stock is, that when high-bred males are used, the progeny should be fed in something like the same way as the parent stock.

Thus, Durham cattle, and Leicester sheep are, in a great measure, created by good feeding, and where they are employed in crossing, the progeny must be fed in a way very superior to what is common in this Province, otherwise it will not be found to answer.

## THE DOMESTIC STOCK OF THIS PROVINCE.

The writer of this is not qualified to go into the history of the domestic stock of this country, nor does he think it at all necessary. That they have all been imported at one time is certain, and that they were fair specimens of the breeds they belonged to is possible, but injudicious crossing and scanty feeding have had their usual effect, and now they are at a point, when, according to the proverb, they should begin to mend, since they cannot well get worse. There are exceptions to this, I am sure, but they are exceptions only.

## CATTLE.

The cattle of this Province, are kept principally for dairy purposes, and consequently any attempt at their improvement should be made with a view to their milking properties; here again the male animal will best suit our purpose, and fortunately we have not the same difficulty in making the selection, as in the case of the horse.