

Garden, Orchard & Forest.

PRUNING IN SUMMER.

The Horticulturist says:—

Now is the time, friends, about the 15th to 29th of July, to prune and pinch back those limbs of superabundant luxuriance. Go through the orchard, nip off with your finger-nails the top of any straggling sprouts, or clip them off altogether with a pruning knife. Many of our most experienced horticulturists find the month of July quite as effective for pruning as in the early and late winter. The theory of this is thus explained by the *New England Farmer*:

By the time midsummer comes, most of the sap that flowed up in the spring has gone to the branches and aided in expanding buds and blossoms, and in sending out new leaves and extending the twigs. When the tree has done this, the superabundant sap extends down the tree through the bark and increases its diameter.

The tree now has a season of rest. The sap vessels are comparatively empty, so that if its branches are cut, the wound will rarely bleed. The returning sap, we suppose, soon forms a green, healthy ring about the cut in the bark, and the remainder of the cut dries and shrinks before the sap is again in motion. This season of rest, then, of three or more weeks, is the best time to prune.

All fruit trees growing as common standards should be allowed to assume their natural form, the pruner going no farther than to take out all weak and crowded branches.

Some persons go into the centre of a tree and cut away quite large limbs, when the desired object could be much better gained by thinning out their extremities. It is always better not to cut a large branch, unless it is actually endangering the tree considerably. Taking off large limbs tends to throwing out suckers the following summer. All these should be rubbed off when they first appear.

A WONDERFUL PEAR TREE.

Our horticultural friend, Mr. C. J. Miller, of Niagara, related to us the history of a pear tree growing on his farm near Virgil. The tree is at least 100 years old, and at its base measures 10 feet 3 inches in circumference, but about five or six years ago a large limb, measuring some twenty inches through was broken off in a storm, and the rent then made in the trunk has been securely fastened by a strong ox-chain.

Mr. Miller's predecessor on the farm, some 15 years ago, asserted that he had picked 100 bushels of pears off the tree, and since Mr. Miller became proprietor he has repeatedly in one year picked 20 barrels of good fruit, and the tree having grown to a great height, some eight or ten barrels more have blown off. The tree is still in good bearing, was originally a seedling and a good one; is now grafted, and some of the Bartlett pears grown thereon were exhibited by Mr. Miller at Guelph. There is also another similar pear tree, but some ten years the junior of the other, and we understand is prolific with somewhat similar results.—*Ec.*

SOAKING SEEDS.

Soaking seeds in a dry time is regarded by the *Rural Home* as a risky operation, unless particular attention is paid to putting the soil in suitable condition. A soaked seed in dry and lumpy soil is almost sure to perish if the drouth is prolonged. The dry earth and the air in the crevices around the grain extract the moisture before the roots form and begin to absorb food from the soil. But if the soil is well pulverized so that its natural condition is somewhat moist, and the seed is then covered pretty deep, it will usually live. Those who endeavor to hasten growth by soaking the seed previous to planting should take care to use the roller and harrow without stint.

This month grape vines will throw out extra shoots and suckers, which should be rubbed off at once. Young peach trees should be looked after for the same purpose. Mulch newly planted trees and vines to keep the ground moist about the roots. This is better than watering.

STRAWBERRY beds must be kept free from runners, if you desire fruit rather than an increase of plants. It is better to cut than to pull them off. Mulch and water the plants, if a long bearing season be desired.

RELATIONS OF TREES TO WATER.

The general practice of the pioneers of civilization on this continent was to cut down the wood chiefly from the uplands and the lower slopes of the hills and mountains. They cleared those tracts which were most valuable for immediate use and cultivation. Necessity led them to pursue the very course required by the laws of nature for improving the soil and climate. The first clearings were made chiefly for the purposes of agriculture, and as every farm was surrounded by a rampart of woods, it was sheltered from the force of the winds, and pleasantly open to the sun.

But when men began to fell the woods to supply the demands of towns and cities for fuel and lumber, these clearings were gradually deprived of their shelter by levelling the surrounding forest and opening the country to the winds from every quarter. But the clearing of the wood from the plains while it has rendered the climate more unstable, has not been the cause of inundations or the diminution of streams. This evil has been produced by clearing the mountains and lesser elevations having steep or rocky sides; and if this destructive work is not checked by legislation or the wisdom of the people, plains and valleys now green and fertile will become profitless for tillage or pasture, and the advantages we shall have sacrificed will be irretrievable in the lifetime of a single generation. The same indiscriminate feeling of woods has rendered many a once fertile region in Europe barren and uninhabitable, equally among the cold mountains of Norway and the sunny plains of Brittany.

Our climate suffers more than formerly from summer droughts. Many ancient streams have entirely disappeared and a still greater number are dry in summer. Bous-singault mentions a fact that clearly illustrates the condition to which we may be exposed in thousands of locations on this continent. In the island of Ascension there was a beautiful spring situated at the foot of a mountain which was covered with wood. By degrees the stream became less copious and at length failed. While its waters were annually diminishing in bulk, the mountain had been gradually cleared of its forest. The disappearance of the spring was attributed to the clearing. The mountain was again planted, and as the new growth of wood increased, the spring reappeared and finally attained its original fullness. More to be dreaded than drought and produced by the same cause—the clearing of the steep declivities of their wood—are the excessive inundations to which all parts of the country are subject.

If it were in the power of man to dispose his woods and tillage in the most advantageous manner, he might not only produce an important amelioration of the general climate, but he might diminish the frequency and severity both of droughts and inundations, and preserve the general fullness of streams. If every man were to pursue that course which would protect his own grounds from these evils, it would be sufficient to bring about this beneficial result. If each owner of land would keep all his hills and declivities and all slopes that contain only a thin deposit of soil or a quarry, covered with forest, he would lessen his local inundations from vernal thaws and summer rains. Such a covering of wood tends to equalize the moisture that is distributed over the land, causing it, when showered upon the hills, to be retained by the mechanical action of the trees and their undergrowth of shrubs and herbaceous plants, and by the spongy surface of the soil underneath them, made porous by mosses, decayed leaves and other debris, so that the plains and valleys have a moderate oozing supply of moisture for a long time after every shower. Without this covering, the water, when precipitated upon the slopes would immediately rush down over an unprotected surface in torrents upon the space below.

Every one has witnessed the effects of clearing the woods and other vegetation from moderate declivities in his own neighborhood. He has observed how rapidly a valley is inundated by heavy showers if the rising grounds that form its basin are bare of trees and planted with the farmer's crops. Even grass alone serves to check the rapidity with which the water finds its way to the bottom of the slope. Let it be covered with bushes and vines, and the water flows with a speed still more diminished. Let the shrubbery grow into a forest and the valley would never be inundated except by a long continued and

flooding rain. Woods and their undergrowth are indeed the only barriers against frequent and sudden inundations, and the only means in the economy of nature for preserving an equal fullness of streams during all seasons of the year.

At first thought it may seem strange that the clearing of forests should be equally the cause both of droughts and inundations; but these apparently incompatible facts are easily explained by considering the different effects produced by woods standing in different situations. An excess of moisture in the valleys comes from the drainage of the hills, and the same conditions that will cause them to be dried up at certain times will cause them to be flooded at others.

Nature's design seems to be to preserve a constant moderate fullness of streams and standing water. This purpose she accomplishes by clothing the general surface of the country with wood. When man disturbs this arrangement he may produce evil consequences which he had never anticipated. We are not, however, to conclude that we may not improve the soil and climate by changing the original condition of this wooded surface. The clearing of the forest may be reduced to a science whose laws are as sure and unexceptionable as those of mechanics and hydraulics. Though it has not gained much attention from the public mind, it is well understood by the learned who have made this branch of vegetable meteorology their special study.

Our danger lies in neglecting to apply these laws to operations in the forest, and in preferring to obtain certain immediate commercial advantages at the risk of inflicting evils of incalculable extent upon a coming generation.—*W. F. in "Woods and By-Ways of New England."*

NORWICH FARMERS' CLUB.

Mr. D. S. Butterfield read the paper on the cultivation of fruit, which we abbreviate:—

I shall confine my remarks wholly to the cultivation of apples. Fruit culture is a branch of agriculture which we are all as farmers interested in to a greater or less extent; more particularly the raising of apples. Any farmer can afford at least to raise apples enough for his own family. There is no kind of fruit more generally used than apples. Other fruits may command a higher price, but for usefulness and general consumption with all classes the apple stands at the head. A writer on the subject once said he thought it would be a greater loss to have apples taken away than all other kinds of fruit combined.

I think it is just as easy to raise a first class apple as it is a poor worthless one, not fit for a hog to eat. I will give you my views of raising a young orchard. The first object will be to select a good location for an orchard, and I would recommend a rolling piece of ground with a northern descent, if such a piece is convenient; if not, any other except an eastern. I would prefer a strong clay loam, and if not naturally drained, I would underdrain it; if not able to do that I would surface drain it with open drains, as fruit trees will not thrive well on a soil saturated with water; the trees will be sickly, and have a tendency to raise out of the ground.

It is an advantage to have the ground in a good state of cultivation and well manured the previous crop—a good crop of some kind, although I have had very good success in setting trees in a good clean sod of clover and timothy; but it requires more work in setting out the trees.

Having the ground all prepared I would go to some reliable nursery and select my trees myself of about four years' growth, and would superintend, taking them up myself and seeing that it was done carefully, so as to not injure more roots than could possibly be avoided. I have found by purchasing trees of different parties, that were delivered, many of them badly bruised in the bodies as well as roots, caused by careless handling in taking up and loading; such handling will show itself in their growth (if they grow at all) after being set.

I would stake or mark off the ground forty feet each way; that will give 28 trees to the acre, or 1600 square feet of space to each tree. I would set for an orchard of 100 trees the following proportion of varieties: 1 Early Harvest, 1 Red Astrachan, 2 Porter, 2 Duchess of Oldenburgh, 2 Colvert, 2 Cayuga Red Streak or wine, 1 Snow, 3 Fall Pippin, 1 Pomme Grise, 2 Tallman Sweet, 1 Swar, 5 King of Tompkins County, 5 Baldwin, 5 Spitzenburgh, 4 Talapahocin, 3 Yellow

Bellflower, 1 Northern Spy, 10 Waggoner, 2 Rock, 10 Roxbury Russet, 10 Golden Russet, 25 Rhode Island Greening, total 100, 21 varieties. This collection will enable a person to have green apples the whole year. I think this number of varieties quite enough for profit in any common orchard. There are many other good varieties that I have omitted. If I were going to enlarge the number of trees to several hundred I would increase the number of the last five varieties, as I consider them the best shipping varieties.

I would open a place large enough to receive the roots (not dig a hole and cram the roots in, as I have seen some do) to about the depth they set in the nursery; see that the roots are all straight and natural; after putting in a few shovelfuls of fine earth or mould, put in a part of a pail of water, move the tree gently up and down that the soil may become thoroughly mixed with the roots, then fill up even with the surface and press the soil gently with the foot. One thing quite important is to have the trees in straight rows each way. After the orchard is set, stake and tie every tree with good straw, that the wind may not cause them to lean. After this is all complete, mulch every tree with coarse manure or straw.

If these rules are carefully observed you will not complain of trees dying out. I think one great cause of a failure in raising an orchard is carelessness in setting. Our dry hot summers are very trying on newly set trees, unless great care is used in setting them. The same rules will apply to taking up and setting every other kind of trees.

After the orchard is set I would keep the ground in some kind of a hoed crop and keep the land well manured; wash the trunks of the trees every spring with strong soap suds, as it has a tendency to keep off insects, besides giving the bark a rich glossy appearance. Keep them well trimmed so as to form an open, well-balanced top, not too high from the ground, and the fruit will not be so likely to be blown off.

To protect young trees from mice during winter, I have found that making a little mound or hill around the body and keeping the ground clean were about as good preventatives as I ever tried. In taking care of an old orchard I would graft every tree that does not produce good, profitable fruit, unless the tree is on the decay; in that case I think it would be useless. A person who has not tried the experiment would be surprised to see in how short a time an old tree can be renewed. If you cannot do it yourself, employ a reliable grafter, and he will bring about a great reformation in your trees in about three years. Many people make a great mistake in cutting off all the top of a tree the next year after being grafted; the consequence is in nine cases out of ten the tree dies. You should be at least three years cutting off the natural limbs; by that time the grafts will be grown so they can take the place of the natural branches. It is a good plan to scrape off the rough bark of old trees early in the spring, and keep the ground well cultivated, or if kept in sod, well manured around the trees.

We have one great enemy to contend against in raising apples, that is the "Tent Caterpillar," which you are all too well acquainted with to need description from me. My plan of destroying them is as soon as I discover their nests or webs, which is about the 10th or 15th of May, I nail a small piece of long-wool sheepskin on the end of a long pole, and with soft soap reduced a little with rain water, give them a good soaking, which kills every one that the soap touches; one or two applications will destroy every one. I generally go over the orchard two or three times in the course of the spring, and if all would try the same experiment, in a few years they would be annihilated. I have not been troubled much for the last two years with these pests, but there was another very formidable enemy that made its appearance last season that did a great deal of mischief in our orchards; that was the apple worm.—There is a small grey winged miller that deposits the eggs in the blossom end of the apple as soon as the apple is formed, and the grub as soon as hatched eats its way into the core of the apple, causing many to drop off, and those that do not drop off are injured so as to not keep, and are consequently not fit for shipping. I saw a plan recommended to build bright fires about in the orchard in warm nights, the fore part of June, which would attract the millers, thereby destroying them in great numbers. I think it would be advisable for all to try the experiment.