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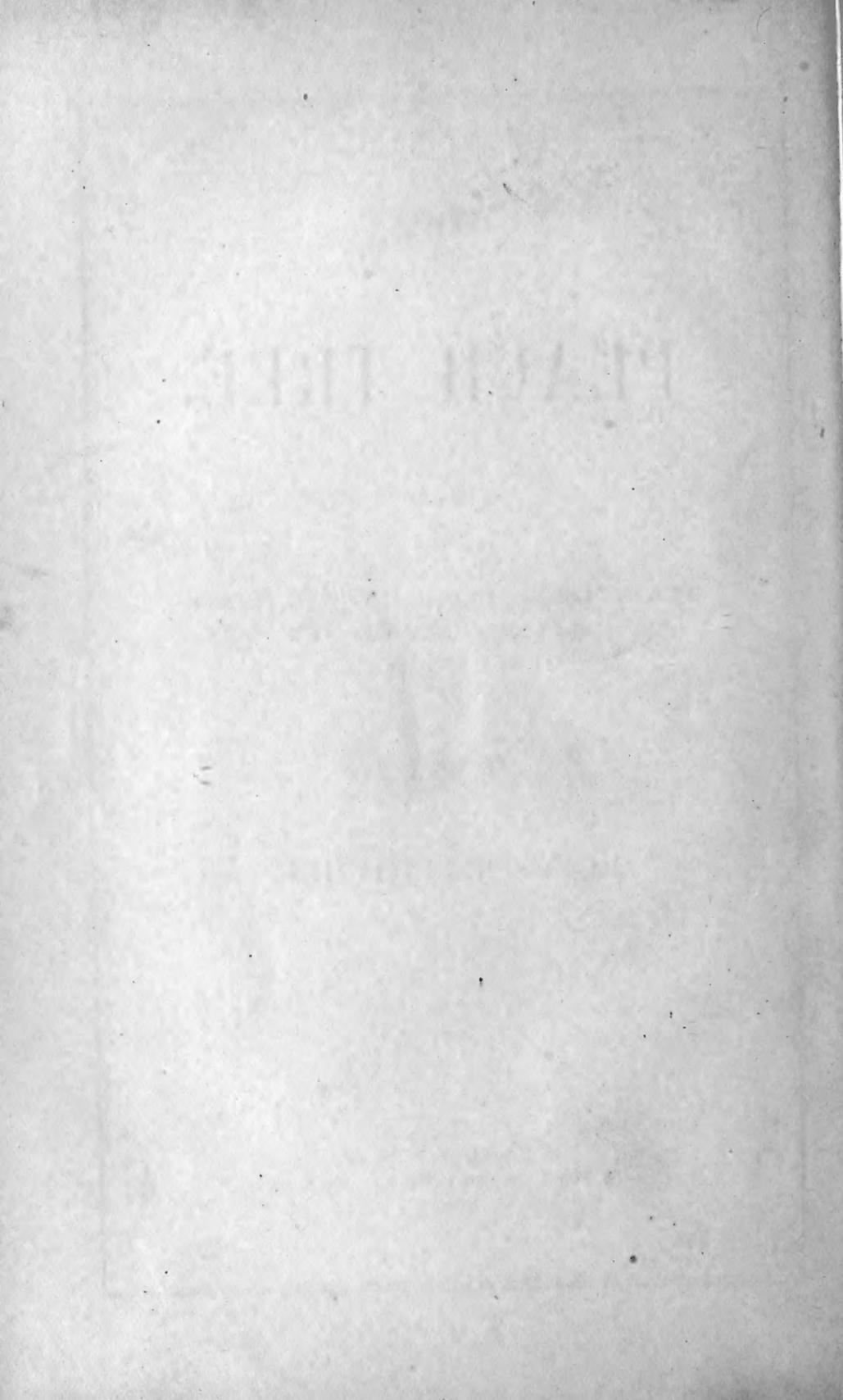
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THE

PEACH TREE.

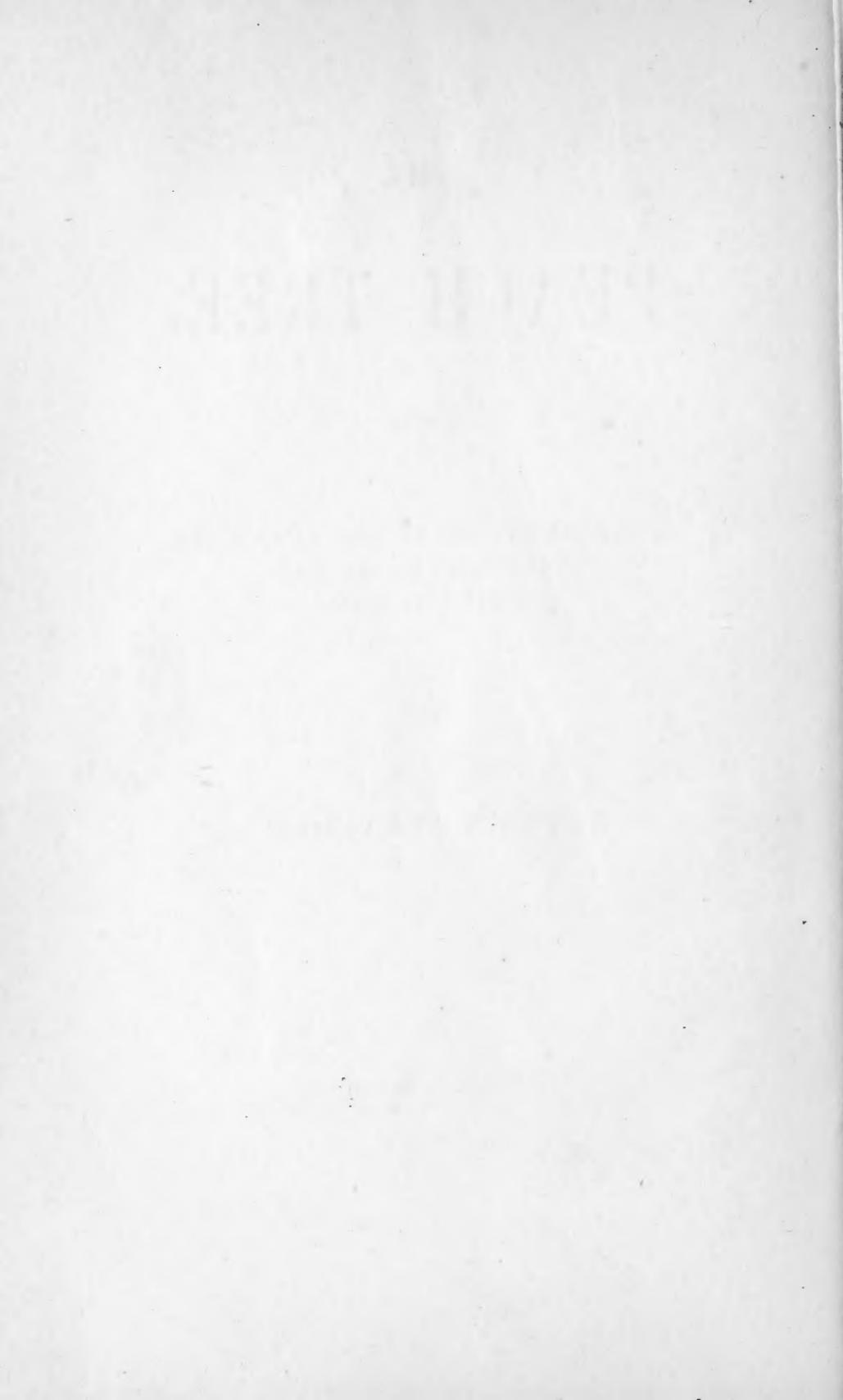
HOW TO

PLANT, GROW, PRUNE AND CULTIVATE
SUCCESSFULLY ON NEW
ENGLAND SOIL.

BY

RUFUS R. FLETCHER.

NASHUA, N. H. :
C. B. FELCH PRINTING HOUSE.
1881.



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INTRODUCTION.

Many of my friends, peach growers, have urged me to put in print my ideas in growing the peach and treating its various troubles. I have, in my humble way tried to give my ideas and experience in these few pages, in such a manner, that every one may understand them.

Those who have treated their trees in the manner laid down in this little book have succeeded beyond their expectations.

I believe the time will come, and that before long, when peaches will be grown as readily as apples and the market will be supplied with more of the better class of peaches. The producer will then receive a surer income and the consumer will be better satisfied.

It seems strange at this late day, that science, horticultural and agricultural papers have been spread over the land to the extent they have, and that there could be found men who have the lands and other facilities and still do not have the peach growing either for market or for family use. But such is the fact, that hundreds have the most desirable lands for the peach and have wholly neglected to set the peach tree, and if it was not for their neighbors raising them, they would hardly know what a peach was.

It is very strange such delicious fruit is within the reach of so many and they do not make an effort to grow at least enough for their own use.

Fifty years ago if a farmer here in the country should have a dozen peach trees bearing at once, they would go to waste for there was no sale for them. Any one would be welcome to help themselves to all they wanted. What a change now, peaches are canned and dried and used in various ways. The demand is increasing, and the supply of first-class peaches is very limited.

If the instructions laid down here are followed by our peach growers, our markets will be better supplied with larger and better fruit.

RUFUS R. FLETCHER.

Ayer, Mass., 1881.

THE PEACH TREE.

The peach tree is a native of China and Persia. It was cultivated in England and France early as 1550, and was brought to this country by the early settlers.

It is claimed by different writers that there is no country in which the peach is grown so abundantly as in the United States.

China and the United States are the only countries in which both peach and apple attain their highest state of perfection in the open orchard.

There is no large fruit so delicious as the peach. What is there for fruit that will compare in beauty with a well developed "Crawford Early" or "Crawford Late"? The rich golden ground and the beautiful red cheek make it very handsome and attractive.

The peach tree left to itself usually comes into bearing the third or fourth year.

In our cold New England climate the peach requires more care to make it a success than it does in the more genial climes of the south.

The tree should be kept in a good state of cultivation. You may plant in the orchard a hoed crop but never a sown crop. Grass, rye and oats are very injurious; they take from the soil what the trees require to grow and develop its fruits. I have seen orchards nearly ruined by a single crop of rye. It stunts the trees, and makes them look sickly and in many cases has destroyed them.

The peach can be grown upon almost all kinds of soil. I have seen very good crops on heavy clay soil, but the trees will not do as well as upon other soils.

With fair treatment we believe it can be grown and good crops realized in spite of winter frosts of fifteen or twenty degrees below zero, whenever we will give it the care and protection required to do it.

In the twenty years experience I have had with the peach, I have endeavored as far as possible to study its habits, and by experimenting with others, I am satisfied it can be grown as readily as the apple, and more so, for with the apple we get a crop every other year, where with the peach, we get three or four crops in succession. If properly cared for, the peach may produce crops every year and be kept in a perfect state of health and vigor.

The mode of treatment laid down in this work,

will prolong the life and vigor of the tree to twenty or thirty years. The peach has been known to live sixty to one hundred years in France and produce crops yearly. It was treated every year to skilful pruning and good cultivation. In many instances it is trained to a wall or fence and cut back yearly. Old trees with the inside decayed are producing good crops of peaches every year.

The cutting back process assists the roots and gives them the advantage of the top. Properly pruned, the growing parts of the tree are reduced nearly one-half every year. There must be an abundant flow of sap from the roots, and with a fair degree of cultivation will push the reduced top and give in all its parts a vigorous and healthy growth.

“THE YELLOWS.”

This malady, it is claimed, belongs exclusively to this country and to attack only the peach tree. It is said to spread over and destroy the orchards of whole towns and counties. The most skilful examination of roots, body and branches has failed to discover any insect or other visable cause. The symtoms are the sickly look of the leaves turning yellow ; the growing out of slender wirey shoots a few inches long, with small leaves, and the shoots often starting from the dormant buds on the body and limbs ; some of the prominent limbs begin to die and gradually the whole tree dies.

Some people think the Yellows is always propagated by budding or grafting. By others it is

claimed the Yellows shows itself and is propagated when the tree is in blossom, that the wind and bees carry the poland from tree to tree and in this manner spreads through whole orchards.

There are a great many opinions regarding the causes of the Yellows, some claiming one thing, others another. It is seldom that two men are found thinking alike on this point. Most all writers admit the Yellows to be a constitutional disease. Some claim the most healthy and vigorous growing varieties are the most liable to take the Yellows. The only remedy with most writers on the Yellows is, as fast as the trees are affected to dig them up and burn them, and by this means, stop the malady. And they would advise you not to plant in their places for a number of years.

In regard to this dread disease, we contend there is no such thing as the Yellows as a constitutional disease, especially in this section of the country.

If the peach tree is thoroughly attacked by borers, it sickens and the leaves turn yellow, and is one kind of Yellows. If you should accidently jam and bruise the tree as to cause it to lose a certain amount of gum, it becomes sickly and the leaves turn yellow ; this, also, may be called the Yellows.

If you should be inclined to stimulate your trees too highly, causing them to grow too fast and reach an overgrowth; they will, undoubtedly, go into Winter with green and unripe wood, full of sap and unfit to meet the cold of five or ten degrees

below zero, or even at zero. Consequently your trees freeze and burst open. I have seen many trees so affected that you could see through their trunks, the results that are sure to follow, give us one more kind of Yellows.

Sowing and growing a crop of rye in your peach orchard is one of the quickest and surest ways of bringing on the Yellows.

Overloading the tree, causing it to struggle to grow and mature fruit, stopping almost entirely its growth, growing peaches not more than one-third their natural size, of an unripe and sour quality, will sicken the tree, and not being able to recuperate, it dies. This is a wicked kind of Yellows.

Neglect of proper cultivation, causing the tree to struggle for existence is another cause for "the Yellows." I am sorry to say a large number of the trees set out come to premature death by the neglect of giving them proper food on which to feed. The starving trees begin to show signs of death by the sickly look of the leaves turning yellow. The parties owning them, ignorant of the true cause, become discouraged, and failed to do anything more for them. The borer takes possession, and the action of the frost soon destroys what little life there is left.

One more cause for the Yellows, and the one I believe to be most common, and often destroys whole orchards at one sweep, is the frost. In some localities trees are effected nearly every Winter,

even if the Winter is mild. In the Winter of 1878, peach orchards as a whole looked unusually healthy. The season had been a favorable one for the growing and ripening up of the wood and for the maturing of the best show of fruit-buds of any season for many years. Peach growers were elated at the prospect of a large crop of peaches for another year. In the following Spring, as the trees began to start the alarm was given that the Yellows had struck them. In some districts whole orchards were effected. Some of them tried to leave out, showing but little signs of life and then died, some lived till the Summer was nearly through, others lived through the season, but did not have life enough to start the next Spring. I examined many orchards in Middlesex and Worcester counties, Mass., also a number of orchards in New Hampshire, and I became fully satisfied, the trouble was caused by the action of the frost on the roots of the affected trees. Some of the trees could be moved as you could move a post in the ground, showing in that way a loss of roots. In the Fall of 1878 the ground was well filled with water, and froze quite deep. When examining the roots of the trees we found the little feeders of the main roots mostly broken off, and there were not roots enough left to support the top. I believe the destroying of the roots by the frost was the only cause of the trouble.

I advised those that had their trees affected to cut back the tops enough to give the balance of

power to the remaining roots, and to manure and mulch them. Three or four only were persuaded to follow my advice. They believed the Yellows were upon them, and there was no use in spending time and work for nothing.

John Coburn of Hollis, N. H., had an orchard badly affected, and was one of the gentlemen that followed my advice in treating his trees. A few of his trees were so badly affected I recommended him to cut them down. He cut back well the tops of the remaining ones, stimulated with manure and mulched well as I advised. The following Spring the trees started out a dark green color, made a splendid healthy growth, and matured a good show of fruit-buds. I found him in September very much pleased with the experiment. I then advised him to cut back about one-half the growth and to keep the ground mulched through the Winter. He did so, and astonished his neighbors with a splendid crop of well developed peaches, which paid him more than four-fold for his trouble.

There were two or three others in Massachusetts that treated their trees in the manner Mr. Coburn did, and met with the same good success. This showed conclusively, that it was the action of the frost that caused the great loss of trees in the Spring of '79, in this section of New England.

PRUNING.

The proper time to cut back peach trees is about the middle of September.

The tree should be grown to make a healthy growth from fifteen to twenty-five inches. It should be borne in mind that after cutting back, the top of the tree will grow faster than the other parts. The top or middle of the tree will require more cutting back than the outside. Judgement should be used in pruning, to give the tree the shape of an inverted umbrella, which is the proper and most desirable shape. To obtain this shape, the outside limbs often times require but very little cutting, compared with the middle or top shoots.

The object of cutting back in September is, in this cold climate, to ripen up the wood and to develop strong healthy fruit-buds before cold weather sets in. The tree will then be in proper condition to go into rest.

The tree with this treatment will go through a greater degree of cold without injury, and will mature fruit-buds double the size of those of neglected trees.

Experimenting has proved the fact that a tree that is not cut back, will not stand the cold, as a general rule, of more than ten degrees below zero, and where a tree is cut back at the proper time will mature such healthy buds, and ripened its wood, as to stand from fifteen to twenty degrees below zero and mature a good crop of peaches.

The peach tree if not cut back, often continues growing till late in the Fall. I have known them to grow till the first of November, when heavy frosts came and they went into Winter in a green

state and full of unripe wood. The trees were then sure to suffer from the frost and were in no condition to produce a crop of peaches for the next year. Cutting back at this time stops the flow of sap from the roots, causing the tree to rest, and gives the tree only proper time to develop healthy, plump fruit-buds before frost sets in. In this climate I cannot fix upon any other time to prune than the middle of September. If cut back earlier, there is danger, should there be a warm Fall, of the trees making a second growth, which if they did, would place the trees in as bad condition as they would have been had they not been cut back at all.

Sometimes trees stop growing by the middle of September. Where they have done so, I have tried experiments of cutting back at different times.

I have cut back in November, December, January and February with no better results than from those not cut back at all. I believe the tree requires time to ripen its wood thoroughly and at the same time develop to perfection its fruit-buds before going into Winter. If the trees are given a healthy growth yearly, and are cut back properly, are sure to have fruit more often and of a better quality than can be had by neglecting this cutting back treatment. By cutting back, the fruit will develop to much larger size, the quality will be very much improved and will surely command a better price in the market.

Another benefit derived from cutting back is the prolonging of the life of the tree more than double. There is no good reason why it should not live to the age of twenty-five or thirty-five years in our climate, and be as ready to produce crops at that age as at five or six years.

We do not expect the length of life in this cold climate that it has in France. In that country the life of the peach tree, by skilful pruning, has been prolonged in some instances to one hundred years.

It is an established fact that those who have pruned, mulched and cultivated have succeeded in obtaining very large returns for their labor and trouble.

Is it not worth the while for every one in growing the peach tree to spend a little more time, and raise good fruit that will always command the best prices, prolonging life in the tree, and obtain more fruit every year than can be had by the usual way of treating it.

This treatment of pruning back yearly, does away to a great extent, of thinning out the peaches. By cutting back, the number of peaches is already reduced to nearly one-half the whole number. A very little thinning out of the remainder will give large well developed peaches of uniform size, and if looked after through the growing and ripening season, removing those not inclined to mature, when you come to pick, you will find instead of one-half or three-fourths of your peaches, small and of inferior quality, not one in twenty of that class.

You have by this process produced a good crop and at the same time have assisted the tree by good cultivation to grow a good healthy growth of wood with a plenty of fruit-buds for another year's crop.

By this treatment you have produced more crops, and realized more money for each crop than you could by the usual way of treating them, at the same time keeping the trees in a healthy condition and prolonging the life of your trees.

I have dwelt at considerable length on the cutting back of the trees, for I believe it to be one of the most essential parts in the treatment of the peach.

SETTING AND PRUNING.

Peach trees should always be set in the Spring, and as early as the ground will permit. Set no deeper than they grow in the nursery.

It should be remembered, in setting peach trees, the best results are from those that have all the limbs cut off to one-eighth of an inch from the body, and the top cut back to two and one-half feet from the ground. Start the tree from three buds as near six inches of the top as possible, rubbing off all other buds that may start. This will leave the body smooth two feet from the ground and give you a low tree to start with, which is desirable, making it much better to prune and thin out, and easier to pick its fruit.

It will also prevent strong winds, to a great extent, from injuring the tree.

Start your tree from three buds as mentioned above, at setting in the Spring, and about the middle of September cut back the three shoots or limbs to one-half their length. The next Spring, from these three shoots, rub off all but three buds to a shoot. This will give you nine buds from which to grow shoots the second year. From these nine shoots you can readily grow and prune your tree to the desired shape.

I think trees set fourteen or fifteen feet apart would be better than a longer distance. In this climate we must prune stronger than in a milder one, and by so doing we can have the trees at their proper size, ten or twelve feet through the top and eight feet high. This is as large as you can conveniently prune all parts of the tree, or thin out, and pick the fruit with the help of a step-ladder. Don't fear to cut off the fruit-buds in pruning. It can safely be said where there is one tree that is pruned too much, there are five hundred not pruned enough.

Pinching off the ends of the stronger growing shoots while they are growing, will cause the sap to flow more free to the slower growing shoots and give them a stronger growth. This is very desirable to give the tree an uniform growth. When pruning, be sure to prune the inside shoots as well as those on the outside. If not pruned yearly the inside shoots would in a short time die, making the the fruit grow more to the outside of the tree. Often a shoot may be found growing as to outstrip all

others and to the injury of the other shoots on the limb. This should be pinched in as soon as noticed, which will cause the sap to flow more equal to all parts of the tree.

When trees have grown to fill the space allotted to them they may be kept there by rubbing off the wood-buds. This may be done at the time of pruning, or in the Spring after the wood-buds begin to grow. This may be done with more dispatch after the buds have started, being very careful not to interfere with the fruit-buds. Rub off all the wood-buds excepting one at the base of the shoot, thus making the wood-bud grow as near the limb as possible. This will leave the fruit-buds beyond the wood-buds. In this way you can keep the trees within the space given them as readily as you can a grape vine.

A tree pruned in this way becomes more stalky and strong, and when loaded with fruit or ice will be more able to sustain its load, avoiding the breaking down of limbs which is too common in the fruiting season and in Winter. A tree under this treatment will live much longer and produce better fruit than the tree without this treatment.

It should be remembered the fruit is grown upon the growth of the year before, and every portion of the tree destitute of such growth must be worthless.

Where the tree is not pruned properly all the fruit-buds on it will bear if the season is favorable. Two or three wood-buds at the top would make a very small and feeble growth in consequence of the

tree not being able to carry out its fruit and grow its shoots at the same time. At the end of the season there would be a long space destitute of shoots or buds, and in this manner the central and lower parts of the tree loses its healthy shoots. By heading in or cutting back all parts of the tree as before mentioned, you will succeed in giving the tree a healthy growth in its different parts. The sap of the peach tree runs to the extremities of the shoots more than in any other fruit tree, and being left to itself will grow long and straggly branches.



No. 1.

Another point to be kept in view when pruning, is to give each portion of the tree an equal number of fruit-buds as far as it is possible. By so doing, you will give the tree, in fruiting an equal balance of fruit throughout all its parts, your fruit will be nearly uniform in size, and the sap flowing freely to all parts of the tree, grows its wood-buds and fruit-buds evenly in all its parts, thus giving the tree uniform growth.

Every observing peach-grower knows that a tree, by the time it is four years old, if not pruned, will

begin to lose its inside shoots, and when the tree is older, has lost so many shoots that the limbs become quite naked, as shown by cut No. 1. The tree has not half the healthy shoots it should have from which to grow its fruit-buds. The sap flows feebly through the naked limbs and there are not half leaves enough to provide for a proper growth of fruit. This is sure to be the case with all peach trees that are not cut back.



No. 2.

Cut No. 2, represents a tree that has been treated by the cutting back or shortening in system of pruning. The tree has been pruned to the desired shape, its shoots are evenly distributed, and presents a very healthy and promising appearance.

This system of pruning, where it has been properly applied yearly, has prolonged the life of the tree more than two-fold and caused the tree to produce more and better fruit.

The tree will be very attractive when growing and its beautiful shape will cause all to look upon it with admiration. The tree will be loaded with rich dark leaves, and have a healthy and vigorous

look and perfect shape. If care is taken to set trees in straight rows they will look more grand and noble.

THINNING OUT.

The first thinning out should be done when the peaches are about the size of a shagbark walnut. In thinning be sure to leave the fruit evenly distributed through the tree. Thin out to two peaches to a shoot, which can be done very rapidly in a properly pruned tree. The fruit will require a little more thinning out as the peaches begin to mature by removing all the knurly ones.

MULCHING.

For the first Winter after setting, two or three shovelfuls of earth placed against the body of the tree will afford sufficient protection.

The next season's mulching should be done late enough in the Fall to have the ground frozen to a depth of two or three inches, but not exceeding four inches, and before snow comes if possible.

Mulch well, covering the ground from the body of the tree as far away as the roots would be likely to reach.

The object of waiting till the ground is frozen is to make sure of having the ground and mulching frozen in the Spring. This prevents, in a warm time, the sap starting from the roots. If the sap should start from the roots before a proper time in the Spring the buds will also surely start, then coming a reaction of the frost, or in other words,

a slight freeze of the buds, the germs will be destroyed and they cannot produce fruit. The trees may, and often do blossom and to the inexperienced would show no visible sign they were not healthy blossoms.

I will mention one case of this kind :

In the Spring of 1880, Mr. T. J. Sanderson of Sudbury, Mass., had an orchard which he had skillfully pruned and mulched. He tried the experiment of mulching his trees, leaving a row without being mulched. The trees he did not mulch blossomed in the Spring, but produced no fruit. The trees which he mulched, blossomed and produced a well developed crop. The experiment showed that the sap ran up from the roots and started the fruit-buds too early, for afterwards the frost or a little freeze came and affected the fruit-germs so as to destroy them.

In the Summer of '79 I visited several orchards in Ashby, Mass., where I found the trees badly affected by the action of the frost on the roots, and was pronounced by everybody who looked at them to be the Yellows. Coming to a Mr. Piper's place in the immediate vicinity, I found his peach-orchard in a good state of health. The leaves of the trees had the healthy dark green color, and seemed to be flourishing finely. I asked Mr. P. what made his orchard look so much better than his neighbor's, he answered, "The Yellows had not struck it." I found by going into the orchard the ground covered all through the orchard with mead-

ow-hay, which he said he put on last year to kill the witchgrass. Mr. P. had by accident killed the Yellows by his mulching and had the best crop of peaches in that vicinity.

Another case that I will mention is that of Mr. Marshall Miles of Concord, Mass., who has an orchard with which he took the first premium at the Middlesex County Fair, at Concord in the Fall of 1880. Mr. Miles had pruned and mulched most of his trees nearly after the plan laid down in this book. A few trees in his orchard were neither pruned or mulched and they were affected by the Winter. The trees looked sickly and the leaves turned yellow as thousands of others have done when left to themselves, and they were pronounced by experts to be affected by the Yellows. He was advised to dig up and burn them, root and branch, as the only known remedy for the Yellows. I saw the trees a short time after and advised a different course of treatment, which was to cut back the tops to meet the loss of roots, to stimulate with some good fertilizer, and to mulch them at the proper time in the fall. In cutting back, I advised to be sure and give the roots the advantage of the top, that is, the remaining roots should yield sufficient sap to support the reduced top. My advise was heeded, and every one of the trees started and made a splendid growth. At this time you would not mistrust they had ever had the Yellows. In stimulating the trees to grow, it brought them back quickly to their natural health and vigor.

Those who may wish to treat their peach trees with this system of training which has proved so successful, I wish to impress upon their minds the necessity of cutting back their trees nearly as possible at the time laid down in a previous chapter, namely, the middle of September. The time from the middle of September to Winter is required to ripen the wood and develop the perfect fruit-buds, which is very essential to prepare the tree to go through Winter and produce fruit with any degree of certainty.

THE BORER.

The peach borer or peach worm is a great nuisance and tries the patience of peach-growers. It girdles and devours the whole circle of bark just below the surface of the ground, ruining the tree by its ravages.

Downing's description of the insect in its developed state is a slender, dark-blue, four-winged moth, something like a wasp. It commences to deposit its eggs in the soft and tender bark of the tree which lies at the base of the trunk, usually about the last of June, but often at different times from June to October. The eggs hatch and become small white borers or grubs, which eventually grow to be three-fourths of an inch in length.

This troublesome little creature is very persistent in its efforts in penetrating the tree, devouring the bark and sap, and if allowed to continue its work, will surely take all health and life from the tree.

After passing the Winter in the tree, the borer enfolds itself in a cocoon under or upon the bark and emerges in its perfect or winged form in June and begins the deposit of eggs for another generation.

It is not a difficult matter to keep the borers from the trees if a little pains be taken in season.

Experience has proved that wood-ashes or air-slacked lime, from two to four quarts, according to the size of the tree, heaped against the body, will protect the tree from borers. It should be applied in the month of May and remain till October, when it may be spread over the ground to act as a fertilizer. I have seen many orchards treated in this manner with perfect success. An old adage says: "An ounce of prevention is worth a pound of cure," and if we prevent the borer from entering the tree we shall avoid the trouble of cutting and injuring it to remove the destructive little pest.

WASH FOR TREES.

Take Stone lime, slack and prepare as ordinary whitewash; make about two-thirds of a pail full of this, now add one pint of gas tar, one pound of whale oil soap dissolved in hot water, or take one pint of common soft soap, or one pound of potash, or one pint of strong lye from wood ashes, then add clay or loam enough to make it the proper thickness, to be applied with a common white-wash brush.

If the trees have the earth ridged around the body take the earth away and apply the wash

to the body from the limbs to the ground. The advantages of this is that it will destroy the bark-louse and will give the tree a bright, clean and healthy appearance, and will also remove and prevent rust.

It will prevent the attack of the borer in apple and peach trees; it has been known where the trees have been badly affected by the borer to entirely drive them away by one application, and the tree has become healthy and vigorous. Again, mice and rabbits will not girdle trees where the wash is used.

Apply in May for general benefit and late in Autumn as a preventative for mice or rabbits.

Gas tar applied alone will kill the trees.

HOW TO EUCHRE THE BORERS.

FROM N. Y. FRUIT RECORDER.

Ten years or more ago I tried the use of paper bands and gas tar, in various forms, on my peach trees, and, when carefully applied, it was effective in excluding the borers, but for the past seven or eight years I have practised a more excellent way, and I know other fruit growers who have done the same, and would not think of going back to the old methods. It is simply using carbolic acid, which is the essence or spirit of gas tar, and is easily made to combine with water by adding soap, while the tar itself will not combine, and is far less safe and cleanly in its application. My rule for preventing borers is to get a pint

of crude carbolic acid—costing twenty-five cents, and is sufficient for twenty gallons of the wash. Take a tight barrel and put in four or five gallons of soft soap, with as much hot water to thin it; then stir in the pint of carbolic acid, and let stand over night to combine. Now add twelve gallons of rain water and stir well; then apply to the base of the tree with a short broom or old paint brush, taking pains to wet inside of all crevices. This will prevent both peach and apple borers. It should be applied the latter part of June in this climate, when the moth and beetles usually appear. The odor is so pungent and lasting that no eggs will be deposited where it has been applied, and the effect will continue till after the insects have done flying. If the crude acid cannot be obtained, one-third of the pure will answer, but it is more expensive.

RECEIPTS.

For curled leaf and mildew which is so destructive to the small limbs of the peach, use strong soap suds, or whale oil soap.

Tobacco soap will destroy bark insects, mildew, etc.

One-half peck of lime and one quart of soft soap mixed with water, making a wash, and applied with a brush to the body and limbs of the tree is one of the best washes. The color may be changed if objectionable by adding the desired coloring.

MANURES.

In undertaking to grow the peach properly and

to the best advantage it is essential we first know, what kind of food nature requires for it.

By obtaining an analysis of the peach tree we find it contains,

| | | | | | |
|-------------------|---|---|---|---|-----------|
| Potash | - | - | - | - | 12 parts, |
| Lime | - | - | - | - | 23 “ |
| Phosphate of Lime | - | - | - | - | 21 “ |

Therefore, lime is what nature requires for the tree to feed upon more abundantly than any other ingredient and it is one of the cheapest fertilizers that can readily be had.

Lime then, is what is needed to grow a healthy and vigorous peach tree, one capable of standing to a certain degree, the cold of our climate, and one that will resist the many troubles, and trials to which it is subjected. If we give to the tree what it wants to grow and make it what nature designed it to be, it will resist its enemies with more ease and grace than it could growing in the natural way which most of the trees are growing in this section of the country.

We have grown trees, using stable manure for fertilizer but it gave the trees properties which in a natural healthy state they did not require, and it changed the trees to sickly, feeble things.

As lime is what the tree needs more than any other ingredient, and as it is cheaper than stable manure and can be applied more readily, there should be no excuse for growers to neglect giving the trees all the lime they require. The little feeders will reach out from the main roots, and

drawing in the lime will impart it to the body of the tree in such quantities that the little white specks of lime may readily be seen in the bark of the trunk and limbs.

Lime, phosphate of lime, and potash constitute the chief food for the peach tree. These are needed by the tree in growing and bringing its fruit to perfection. When the soil becomes exhausted of these properties it will be plainly noticed in the quality of the fruit.

When we feed the trees properly, they not only produce better fruit, and show a rugged look, but they will live much longer, bearing fruit year after year.

Ten barrels of air-slacked lime to an acre, yearly, would be little enough, spread over the ground and cultivated or plowed in.

Wood-ashes for the potash would be best, and can be applied at any time from April to July with good effect. It acts quickly, and can be readily obtained by most farmers.

Stable or hen manure, or phosphate composted and applied in moderate quantities two or three times while the tree is growing fruit will assist very materially in the right direction.

It is an established fact that all kinds of fruit can be grown larger and better by putting the manure on the soil two or three times in moderate quantities while the fruit is growing, rather than applying it all at once in great quantities.

The trees should be fed as often as it needs feed-

ing to give them a good growth at the time of growing and maturing its fruit. If this is not done the trees will bear small peaches that command but a small price in the market. If the trees are not given fertilizer they become feeble and are placed in no condition to grow healthy fruit-buds for the next season's crop. The life of the trees will be shortened by weakness and premature age soon puts the trees beyond reach of help. They are taxed beyond their strength in growing fruit and wood, and become so sickly the owner believes his trees have the Yellows, when the real trouble is in the fact the tree is starving. There is a law to punish a man if he starves his cattle, but none if he starves his trees, but it is about as much to his discredit and shame if he has knowledge of the fact and does not try to remedy the fault.

It costs no more to carry peaches to market worth three dollars a bushel, than those worth only a dollar a bushel, and our market has too many of the cheap class of peaches. There is an increasing demand for the better class of well grown fruit, and those raising the best peaches are making the most money.

Trees will require less manure when treated by the cutting back process, as they do not require as much sap to give a vigorous growth.

Great benefits are received by pruning properly, ill directed pruning will cause harm. It is just as easy to prune right as to prune wrong. There is but little danger of pruning too much, as it has

added to the life of the tree, and the doing away with so many kinds of Yellows, I am sure will be inducement enough to encourage you to prune and mulch your peach trees.

ANALYSIS OF THE PEACH TREE.

The following analysis made by B. Kirtland, Esq. of Poland, Ohio, will be found extremely useful to every planter.

Equal quantities of limbs and twigs from three different kinds of peach trees were taken and after being thoroughly dried—whereby they lost 44 per cent of water—were carefully burned with a moderate fire, yielded as follows :

| | |
|-----------------------------|-------|
| Charcoal and Sand, - - - - | 3.18 |
| Silica, - - - - - | 1.48 |
| Phosphate of Iron, - - - - | 2.17 |
| Potash, - - - - - | 12.54 |
| Seda, - - - - - | 2.00 |
| Sulphate of Lime, - - - - | 2.25 |
| Lime, - - - - - | 23.95 |
| Phosphate of Lime, - - - - | 21.69 |
| Magnesia, - - - - - | 7.05 |
| Peroxide of Manganese, - - | .80 |
| Chloride of Sodium, - - - - | .69 |
| Carbonic Acid, - - - - - | 33.35 |

After giving the analysis Prof. Kirtland adds :

“Lime and bone-dust, we judge, will be found especially beneficial in perfecting truly healthy trees, capable of enduring the great changes of our New England climate.”









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