THE APPLE ORCHARD AS AN INVESTMENT: HOW TO BEGIN TO GROW APPLES IN THE RIGHT WAY: BY W. H. JENKINS

NOT long ago I heard the president of the largest and oldest horticultural society in the country, a man who has a world-wide reputation as a nurseryman and horticulturist, say to a friend asking about the likely outcome of planting a commercial apple orchard: "You can make no better investment for old age, or leave your family a more valuable asset than a Jonathan apple orchard that has been cared for scientifically." The testimony of this prominent orchardist is strongly corroborated by the experience and observations of the writer, who also knows the possibilities of apple trees when rightly tended. Indeed it is from his own knowledge gained by work among trees and from his study of the most progressive orcharding in the United States that he bows to the expressed expert opinion. The discovery of certain principles of cultivation by which plant food can be obtained from the atmosphere for trees and because they can now be subirrigated by utilizing the force of capillary attraction, a new era has dawned for the apple orchard as an investment. Such an orchard is a good financial proposition because science now enables the orchardist to produce more perfect fruit at smaller cost than ever before, and because there is a growing demand for high quality fruit; also because of the improved methods of distribution.

In one of the model orchards in western New York, the writer has seen apple trees planted 40 feet apart, yet grown so large that their branches came together in each direction. They were low-headed trees, their crowns being probably 40 feet in depth; their circumference about 120 feet, and their height averaging perhaps 20 feet. This large bearing surface was almost entirely covered with perfect apples,—no scabby or worm-eaten fruit was in sight, while each apple appeared sound and well developed. The leaves, the feeding organs of the tree, had been kept free from fungus by spraying and being thus in healthy condition they were able to absorb the gases from the atmosphere and to feed the fruit until fully grown. These trees, moreover, had been well pruned, and the apples thinned out, so that no more remained than the trees could develop. The sun could reach every apple some time during the day and give to it both color and flavor.

The soil of this orchard had been well cultivated from early spring until the middle of July. There were hardly any weeds. A cover crop of clover sown a few days before my visit was just coming up. The clover, in its ability to take nitrogen from the air, feeds the trees through their decaying stems and roots, while the clover roots become available plant food for the next season, the time when frequent cultivation will bring up moisture to the base of the trees and also aerate the soil by the admission of air, moisture and sunshine preventing it meantime from getting acid or "rusty." This method of cultivation combined with timely and thorough spraying with a high pressure power sprayer, had kept the trees of this orchard in such good health that hardly a diseased twig or blighted leaf could be seen over many acres of planting.

Trees such as I have described will pro-
duce 40 and perhaps 50 bushels of No. 1 grade apples. If the quality and flavor of the apples is high and they are fancy packed they will sell for from $1.00 to $3.00 per bushel. In fact the owner of one of these progressive orchards told me that his sales from one acre alone had amounted to $1,600 at ordinary market prices.

In the last few years the possibilities of apple growing have been encouraged by the use of modern and scientific methods, and today the planting of high-grade apple trees is a better investment than interest bearing securities or life insurances. The question may be asked: "How shall I begin to plant an apple orchard, for a tree that should last 100 years or more should be planted without serious mistakes?"

In all such consideration the selection of the right kind of soil is of primary importance. The best orchard lands occur along the southern shore of large lakes, where the north winds are tempered by blowing across them and where the proximity of a large body of water lengthens the growing season, provided there are no hard frosts. Generally the soil near lakes is a rich alluvial deposit, easily cultivated. These lands are high-priced and are happily not necessary to the profitable production of apples. There is hardly a State in the Union where good apples cannot be grown. Next to the belts of land along the lakes, the slopes following streams in hilly portions of the country are to be preferred. Strips of land between rivers and brook flats; also steep hillsides that should be covered with timber, if of fair depth of soil and naturally drained, should produce fine apples. Lowlands and those with poor drainage should not be selected for apple orchards.

As a necessary preparation of the soil it should first be turned into a clover sod, making the condition ideal for the growth of trees. The first thing to do with a non-limestone soil, is to plow the land, and apply 2 or 3 tons of carbonate of lime per acre or one ton of quicklime. The lime is food for the clover which takes the nitrogen from the air, and so is the key which unlocks the vast storehouse of plant food. Lime also makes potash in the soil available for plant food and is therefore equivalent to an artificial application of potash. Sow clover early in the spring with a nurse crop of barley. After one year, or two, you can plow under the clover sod and plant the

APPLE TREES ARE ALL THE BETTER FOR INTERCROPPING IN AN ORCHARD.

trees. This preparation of the soil is not absolutely necessary, but very desirable.

While the soil is in preparation, it is a good plan to buy one-year-old trees, to plant them in nursery rows four feet apart and to cultivate them for a year or two in much the same way as a crop of corn. Time will not be lost but rather gained by a careful preparation of the soil and by starting the trees first in a little home nursery such as I have described. The trees will soon become acclimated, and when dug and planted rightly in their permanent places with fresh earth on their roots, every one should live and grow.

The selection of varieties for an apple orchard is most important. There will probably be plenty of Baldwins and other kinds of low quality in the market for many years; and in their heavy bearing year their prices may not be high. But there is no prospect of a surplus of Jonathan, King, Spitzenburg, Northern Spy, or other dessert apples. The advice given in the first paragraph of this article is good for New York State, i. e., to plant a Jonathan apple orchard. If Jonathan trees cannot be easily obtained, the next best thing is to buy one-year-old Northern Spy stocks, and to bud or graft them to the Jonathan and perhaps other varieties. The Jonathan is doubtless the highest grade of red winter apples: The Newton Pippin is the best of the green varieties. Other dessert apples are Swaar, Delicious, McIntosh, Seek-no-further, Winter Banana, etc. A satisfactory plan is to grow for market only two or three varie-
ties of winter apples. Three-fourths of the trees should be winter apples. Strawberry, Tameuse (Snow), and Jersey Sweet, are very desirable fall apples. In every case select apple trees of the highest quality, those that have proved fairly hardy and productive in your locality. None of the dessert apples are as productive as the Ben Davis and Baldwins, but they can be sold for higher prices, and part of the reward of apple growing should be to market the most high-grade eating apples. Your experiment station or agricultural college should be able to give reliable advice concerning the selecting of varieties.

There is need of some good information about where and how to buy fruit trees. It may not be generally known that there are great nursery centers that produce a special kind of stock, as for instance, the nurseries in the vicinity of Dansville, N. Y., who grow one-half or more of the trees sold in the United States. If you buy trees elsewhere, except of the few nurserymen who grow their own stock, you will probably buy of jobbers selling Dansville trees. Most of the Dansville nurserymen prefer to sell directly to the planter at wholesale prices. Orders, therefore, can be sent to them directly, and trees had at first hand, from the ground or cellar. Twice handled trees must of necessity have undergone considerable exposure, while there is no evading the dealers’ commission. There are good reasons for buying one-year-old trees to start

cost only two-thirds as much as two-year-old trees. Midwinter is the time to place orders for trees, because then the best stock is not sold or the varieties broken up.

Always plant apple trees in the spring, when dormant, that is, before their leaves begin to grow. If trees direct from the nursery are to be planted they should be ordered by freight 2 or 3 weeks before the ground is prepared, and heeled in a trench on their arrival. The soil should be prepared by plowing and harrowing the furrows 40 feet apart, so the trees will stand in check rows 40 feet each way. Some prefer to have the rows run diagonally one way, which is easily arranged for by a little planning. If fillers are planted, furrow the ground 20 feet apart each way, and plant the apple trees alternating with the rows of fillers. When a good market is near, cherry trees are probably the best fillers, sour varieties being preferable, except in the peach belt, where sweet cherries can be grown. Plum, dwarf apples and pears, also the Alexander apple grown as standard trees can be used as fillers. At the lines of intersection or where the furrows cross, deepen the hole a little with a spade, shoveling some of the fine surface soil into the bottom of the hole made to fit the roots of the tree. Shorten the roots about one-third, by clipping their ends with the pruning shears. Place the tree in the hole so that it stands a little deeper than when in the nursery. Cover the roots with fine surface soil, press them down well with the feet, and finish the work by filling in
with the soil from the bottom of the hole. As soon as the planting is done prune back the crowns of the trees to balance their roots. If low-headed trees are desired cut back to 2 or 3 feet high when one-year-old trees are planted. It is not always wise to head back older trees as much, because the head may have been formed already.

Young orchards should always be intercropped with the cultivated crop that pays the best, such as cabbages, cauliflowers, potatoes, corn, strawberries, etc. There is no good reason for losing the use of the ground several years while growing an apple orchard. The only right way is to grow some crop between the rows every year and to keep the soil around the tree thoroughly cultivated. This is the best treatment for growing trees, and the ground will produce some cash crop every year until the trees come into bearing.

When the trees have grown to the bearing size, it may be well to cease intercropping with vegetables and small fruits, and to practice cultivation between the trees until the middle of July. Then a cover crop of clover can be sown provided it thrives well in the locality when sown late. If it does not a mixture of rye and vetch seed can be used to take its place. Early the next spring plow under the cover crop. Its stems and roots will fertilize the trees, with perhaps the aid of a little commercial fertilizer or lime, or what is better still a light dressing of stable manure, reinforced with raw ground phosphate rock used in the stable as an absorbent. Cultivate the soil between the trees as before and sow the cover crop in midsummer. As the trees grow and bear practice yearly pruning and timely spraying to protect the trees and fruit from insect parasites. The apple orchard is now rightly started, and with the scientific cultivation I have outlined, its owner for one or two generations should receive increasing returns.

MODERN WALL COVERINGS
THAT HAVE FULFILLED
THEIR PROMISES OF DURABILITY AND DECORATIVE MERIT

ONE of the customs of Americans that most surprises, even amazes Europeans, is the frequency with which they change the coverings of their walls. More than any other nation they demand originality, taste, sanitation, also an interpretation of individuality in the backgrounds of their homes. And as their ideas change and develop, as they are moved by fashion in decoration or some new theory in sanitation, they express the thought in their wall coverings, forgetting in a week, almost in a day, the older ones that have given way for those more in harmony with the present. In this practice of changing the wall coverings frequently, Americans are truly extravagant, although with their native logic they argue that it is an extravagance paying them a liberal interest.

In an absolutely fresh, sanitary and pleasing wall-paper there is a soothing quality, one restful to the mind while pricking the artistic pulse. Many people, in fact, suffer from dwelling in places where backgrounds are unsympathetic and jarring to their nerves without really knowing what is the matter with them.

One woman exclaimed: "I like this dear little house so much. It has exactly the number of rooms and closets necessary to make me comfortable, the kitchen arrangements are perfect; but I have never felt settled here. I have always a slightly nervous sensation, as if I should soon have to tear up and move."

It was small wonder that the poor woman felt this way. The walls of her living room were done in a queer exciting shade of Pompeian red which seemed to draw them together and greatly to decrease the size of the room; to produce, moreover, a sensation of suffocation difficult to bear. The dining room was in green, but of a most unfortunate shade, cumbrous and heavy without sprightliness or element of youth. It was simply dull, stuftifying to the intellect.

One day a younger woman somewhat radical in her tendencies said: "Why don't you tear off the abominable wall-papers of this place? You'd feel happier. They've been fearfully commmonized and now that they're out of fashion, they're enough to drive one mad."

This advice, energetically given, bore fruit. The next time the young woman went to visit her friend she found that a transformation had taken place. The too ponderous wall coverings had been changed for those more restful and cheerful in tone; for those which had about them the rare quality of self-effacement.