

Orchards of Five or Ten Acres.

Editor "The Farmer's Advocate":

I quite agree with you that there is likely to be a heavy planting of fruit trees in the coming season, and, as the apple thrives over such a large extent of country, that fruit will, of course, receive chief attention. This does not apply to Essex County, particularly along the lake shore, where I am located, as no apples are grown here for commercial purposes, and it is not likely that there will be many planted in any part of this county.

In reply to your second question, I would say that I consider five to ten acres of commercial apple orchard would be about right for the average one-hundred-acre farm, where properly handled. No doubt many could handle much more to advantage, but, with the heavy plantings being made in all apple-growing sections on the continent, I question the advisability of recommending a larger acreage. There is no doubt but that, with the rapid filling up of the Western Provinces, and with increasing prosperity throughout that immense territory, great quantities of apples will be used there, and in increasing quantities from year to year, but, in my estimation, Ontario will not continue to supply that market to the same extent that she is doing at the present time. It was my privilege to spend several weeks during last August and September in the fruit-growing district of British Columbia, and, as they are making very heavy plantings throughout all the fruit-growing districts of that Province, and their trees grow very rapidly and come into bearing very early, bearing very heavy crops in a few years, there will be immense quantities of apples exported from British Columbia, whereas at present they have not nearly enough to supply their own market. As the Western Prairie Provinces are their natural markets, undoubtedly they will supply a great proportion of their requirements.

For soil, I would recommend a sandy loam on a clay subsoil, and next to this a porous clay loam. Either one I would consider ideal land for apples, but fairly good results can be obtained on any soil that will grow potatoes or other root crops. It is more important, however, to have land that is more or less rolling, or with considerable elevation for apple cultivation, but any soil that will retain water on the surface, for say twenty-four hours after a storm, should be underdrained. Drains should be placed half way between the rows of trees, and there will be no danger that the drains will be choked by the roots of the trees, except, possibly, on springy land, where there would be water continually during the growing season.

If the land is in good condition to produce a crop of wheat or potatoes, it will do for apples; if not, it should be seeded to clover, and brought into good condition before planting, as it is important to get good growth from the start. While growing fruit on clay land, a number of years ago, I used a subsoil plow, loosening up the soil to a depth of five or six inches in the bottom of the furrows made with the ordinary plow, but this soil should never be brought to the surface. I think this is a decided advantage where the subsoil is inclined to be solid, as it usually is where the land is of a clayey nature. The root system is established at a better depth, and trees and plants resist drouth and other trying weather conditions much better. This also adds considerably to the drainage. I am not partial to wind-breaks for an apple orchard, but do consider some protection from the prevailing winds an advantage.

To my mind, the commercial apple orchard should not contain more than five or six varieties, and less might be better. It is an advantage, however, to have several varieties, as it gives a longer season for harvesting, which is the chief labor in connection with this crop. There are many good varieties that thrive remarkably well in some localities, and not so well in others. In my opinion, those best adapted for universal planting would be Duchess, Hubbardston, Baldwin, Stark and Spy, and, where it succeeds, McIntosh Red should be included.

A great objection to the Spy is that it is late coming into bearing, but this could be largely overcome if the growers would plant Tolman Sweet or Russets, and, when a few years old, top-graft to Spy from good-bearing trees. By running the rows of varieties the long way of the field, there need not be more than three or four rows of any one variety; and, when there is not, there will not be any difficulty about pollination.

I much prefer two-year-old trees in apples and other seed fruits, and would certainly advise dealing directly with a reliable nursery. If intending planters would place their orders early in the season with some reliable nurseryman, we would hear much less complaint about stock being untrue to name and of poor quality. I much prefer to have my trees delivered in the fall, heeling them in proper shape, then they can be planted as

soon as the weather and the land is suitable in the spring, and a much better stand secured. Where there is danger of mice attacking them, make a wall of wide boards, placed on edge, about the plot where the trees are heeled.

I would by all means plant trees at right angles. I think a good distance to place permanent trees would be 35 x 40, and between the trees spaced at 40 feet fillers could be used. The Duchess is particularly well adapted for this purpose, as it comes into bearing so early, and bears heavily, and does not make so large a tree. The Hubbardston is also a good filler, being an early and abundant bearer. Where it succeeds, the Wealthy also makes a good filler.

By spacing the rows at this distance, and growing roots and vegetable crops for a few years in the thirty-five-foot space, there is little waste of land while the trees are growing. When fillers are used both ways in the rows, they begin to crowd too early, and before they have attained sufficient size to have produced fruit in good paying quantities. I do not like using other varieties of fruits as fillers in an apple orchard, as the different types of fruit require different treatment.

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Select Only Varieties of High Quality.

Prof. J. W. Crow, of the O. A. C., Guelph, in replying to our questions re orcharding, lays great stress on the quality of the fruit, and upon the slope of the land, and the need for great care in orcharding. His letter follows:

This particular locality is not an apple-growing district, and is not likely to become so. I know of two or three cases only in which plantings are being made. Ten acres is the profitable limit of size.

I notice that you use the adjective "enterprising," and I may say that I wish to distinguish very carefully between the "enterprising" farmer and the "average" farmer. I have come to the conclusion that the "average" farmer has no use for an apple orchard of any size as a commercial proposition. An "enterprising" farmer, who can and will give the necessary attention to the orchard, can handle anywhere from five to ten acres. My reason for making this statement is that, in my opinion, the apple industry is becoming to a large extent a specialized business. I believe, of course, that an orchard has a place on a good farm, under a good system of management, but, unless the orchard receives proper care at the proper time, the owner might better devote his attention to something else.

Personally, I believe that the character of the surface soil is not a matter of great importance, because it can be put in proper condition if rightly handled. I am convinced, however, that the character of the subsoil is a matter of decided importance. All tree fruits require thorough underdrainage. If the natural subsoil permits of this, it would be, I believe, an ideal condition. Almost the only requirement one could specify for the surface soil itself is that it should not be too difficult to work. If the underdrainage is not good, artificial underdrains should be used.

The site should be sufficiently elevated, so that all frost pockets should be avoided. In level districts there is, of course, no choice in this matter, but it is safe to say that hollows or low spots, from which there is no possibility of air-drainage, are almost certainly to be avoided.

I should like to put in a word regarding aspect or slope of land. You do not ask regarding this, but I believe it is an important matter. I am firmly convinced that the best slope for an orchard, where there is a choice in the matter, is a northerly one. I believe there is much more frost injury at blossoming time on southerly slopes than on northerly ones, and I believe that the difference is sufficient to establish the general rule that south-west, south and south-east slopes are to be avoided, in the order named. The best slope is northerly, provided adequate wind protection can be had. The next best slope is north-easterly and usually a north-easterly slope is better protected from the sweep of strong winds than any other. These remarks concerning slope of land apply to all that part of Ontario lying outside the immediate influence of the large bodies of water.

Land should be as well prepared for fruit trees as for a crop of corn or roots. If the land is not in good agricultural condition, I should certainly advise delaying planting for one year, or longer, in order to properly fit the ground.

I would select varieties from the following list. They are placed here in order of ripening, but each individual will have to decide for himself regarding the growing of summer and early fall fruits. Winter varieties are considered standard. My own opinion is that fall and early winter sorts pay better, on an average, than the standard winter varieties, provided they are given

proper care. The late summer varieties require, of course, careful handling, but there is no lack of a market for first-class apples of this season. The ripening period of apples should be arranged to suit as nearly as possible other work on the farm. Unless help is abundant, it is well to distribute the picking season over a lengthened time, rather than to attempt harvesting a large acreage of one variety within a few days. The list given contains nine varieties. If one wishes to concentrate on winter apples, no better selection can be made than Greening, Baldwin and Spy. On an average, the most profitable winter apple is Baldwin, but it is being very heavily planted at the present time, and is, moreover, an apple of only ordinary quality. Its commercial value lies in its great productiveness, in its good handling qualities, and its attractive color. It is not an apple which, as ordinarily grown, would appeal to a fancy trade, and I am of the opinion that the best money to be made in the apple business is in the growing of better class varieties than Baldwin, and putting these up in such a way as to make them sought for by a high-class trade. In fall apples, Alexander, Wealthy and McIntosh are all being planted. Alexander is early, and sells on account of its large size and handsome color, but it is only a second-rate cooking apple, at best. Wealthy is a good cooker and a good dessert apple, but unless extremely well grown, cannot be packed as a fancy variety. I may be wrong in this matter, but am glad to advance this statement concerning the most profitable varieties, for the sake of seeing it discussed in your columns. My own choice would be Gravenstein, Snow, McIntosh and Northern Spy, with Wagener as a filler. These are all high-class dessert varieties. Spy is a tardy bearer, but I believe this could be overcome with proper handling. McIntosh is only a moderate bearer, although it bears annually. The other varieties are all decidedly productive.

I expect, within a very few years, to see ordinary Baldwins a drug on the market, and the same may be said of a number of other varieties which are extensively grown in this Province at the present time, for instance, Stark and Ben Davis. Spy and McIntosh are both largely or entirely self-sterile. Snow is an excellent pollinizer for McIntosh, and either Baldwin or Greening is satisfactory when planted with Northern Spy.

If I were selecting for my own purposes, I would choose strong, one-year-old trees, at least four feet high from the ground. I know I am at variance with a large number of planters and with the nursery firms on this matter, but I am persuaded that an intelligent planter taking trees of this age and quality can make of them better trees than can be made from the two, three or four-year-old stock ordinarily supplied by nurseries. A two-year-old, unbranched whip would not be objectionable, provided it has a good strong root, but I believe that a tree which makes four feet the first year in the nursery row is a better tree.

I should certainly advise dealing direct with responsible nursery firms. I should advise any person investing in any quantity of stock to see the same before purchasing, so that he may specify precisely what he wants, and be sure of getting the same.

With regard to ordering early, some of our nurseries have been sold out of certain varieties a year ahead, and one would require to place an order at least a year, or sometimes two years, in advance.

Winter apples should be set not closer than 40 x 40 feet; in the southern counties, 45 x 45 is not too far; fall varieties, 35 x 35 feet, on an average. Duchess and Wealthy could go as close as 30 x 30, or 25 x 25, but the latter distance would give rather too much crowding.

I should plant permanent varieties in solid rows, running them, if possible, north and south. Two, three or four rows of each variety would be placed together. Those which blossom close together would be placed in proximity to each other for the sake of procuring adequate inter-pollination. I should certainly advise against planting any variety in solid blocks. Northern Spy is notoriously a poor cropper when planted in this fashion, and the best testimony on the matter is that any variety is benefited by abundant inter-pollination. My reason for running the varieties in rows north and south is that spraying is done mostly from east or west. This arrangement gives the best possible opportunity for spraying each variety at the proper time.

With regard to the use of fillers, I may say that I should grow as fillers whatever fruits could be successfully marketed. In apples, Duchess, Wealthy and Wagener make the most desirable varieties for use as fillers. Wagener is a high-class winter dessert variety which is not sufficiently known, and should be much more widely planted. Peaches, sour cherries, plums or dwarf pears can be used as fillers. If I could afford it, I should, however, prefer planting these in orchards by themselves, rather than using them as