

Horticultural Department.

In assuming the duty of conducting this Department, we hope to be able to make it indispensable to every one who cultivates a rood of ground in Canada, and to so fill these columns that our readers shall turn to them with the assurance that they are faithfully devoted to their interests, and that here they will be sure of finding the latest and most reliable information upon all subjects affecting Canadian Horticulture. If the Ladies desire to plant a Flower Garden, we hope to be able to give them valuable hints to aid them in the selection of suitable plants and seeds, and in the best method of growing them, so that there shall be no want of beautiful flowers from earliest Spring to latest Autumn. Is it desired that the Lawn should be set with Ornamental Trees and Flowering Shrubs, we hope to be of service in guiding to the choice of those that are not only desirable for their beauty but for their hardihood and ability to endure the rigor of our climate. In the Fruit Garden also we shall try to make ourselves useful, by showing which are the most luscious and prolific kinds of strawberries, raspberries, currants, grapes, and other fruits, and by giving some practical suggestions as to the best methods of planting and training. And in planting an Orchard we expect to be of essential service, by showing what fruits and which kinds have been found to be hardy and productive, or may be expected to prove so in the several parts of the Province; by giving the results of our own and of others' experience upon the most suitable soils and aspects, the best mode of planting, pruning and cultivating, the kinds to be selected for family supply, or those to be chosen with a view to profit for marketing

Profits of Apple-Growing in Canada.

The products of horticultural skill have already assumed commercial relations of no inconsiderable magnitude, and the trade in fruit, even now a large business, is increasing in importance with every year. The growing of fruit for market has been found in many parts of the adjoining Republic to be a very profitable employment, and it may not be amiss if we here inquire whether we might not hope to find it equally remunerative. In the examination of this question we will, for the present at least, pass by the finer fruits and consider only the apple. Not that pears, peaches, grapes, strawberries, &c., cannot be grown with profit, but because we are all better acquainted with the raising of apples, and knowing something of what is the usual yield, and for what they will sell, will be able to form an opinion upon the correctness of our estimates. To write about pears and estimate their value at from eight to fifteen dollars per barrel, or about strawberries, and estimate the yield at one hundred bushels per acre, might seem to some as anything but a satisfactory basis for rational calculation.

That there are portions of the Province eminently adapted to the cultivation of the apple is abundantly shewn by the beautiful samples of this fruit that are exhibited every Autumn, and which, on being sent home to the Exhibition of the Royal Horticultural Society, elicited expressions of admiration and surprise. Which those sections are is even now in a good degree indicated by the recent Report of the Fruit Growers' Association of Upper Canada, and their more exact limits will before long be determined by actual experiment. The selection of the right locality, one where the climate is such that the trees grow well and bear regularly, and where the soil is adapted to the perfect development of both tree and fruit, is a most essential element of success. Another important element will be the selection of the proper varieties, those that combine in the highest attainable degree attractiveness of appearance, excellence of quality, exemption from injury in transportation, and from decay by keeping, com-

bined with vigor of the tree and early and continued fruitfulness. On these points much might be said, and at some future time we may recur to them, but for the present we must content ourselves with supposing that all these things have been duly considered and judiciously decided.

In submitting the following estimates we are aware that it is impossible to make them strictly accurate, but we believe they are placed so low that no one can be misguided; that, in fact, the experience of the careful cultivator will prove the growing of apples to be much more profitable than we make it to be; but we prefer, if we err, to err on the side of caution, and to base our estimates upon no questionable assumptions. We will therefore suppose that such land as is required for a good orchard will bring the large rental of eight dollars per acre per annum. Taking a piece containing twenty acres, it will require to plant it, at forty feet apart each way, six hundred trees. These can be had of reliable nurserymen, of the very best quality, for twenty dollars per hundred. We will put down the cost of planting them at forty dollars, and the cost of keeping the ground thoroughly cultivated at \$150 per annum. The expense for the first year will be:—rent of 20 acres, \$160; cost of trees, \$120; planting, \$40; cultivating, \$150; total, \$470; for the second and subsequent years the expense will be, rent and cultivation, \$310. We will suppose that no crop is taken from the ground after it is planted with trees, and that the trees do not yield any fruit for the first five years. At the end of five years we shall have expended:—first year, \$470; four subsequent years, at \$310 each, \$1,240; total, \$1,710. Taking the sixth and seventh years together, we may expect enough fruit to make the average yield for each year from each tree to be worth twenty-five cents, and that the yield will now begin to increase, so that we may safely estimate the value of the fruit from each tree to be, for the eighth year, fifty cents; for the ninth year, one dollar; for the tenth year, one dollar and fifty cents; and for the eleventh year, two dollars. Should we realize this very moderate sum from each tree we shall have received at the end of the eleventh year from our orchard the sum of \$3,300, and it will have cost us for the first year \$470, and the subsequent ten years \$3,100, making in the whole \$3,570, leaving only a balance of \$270 against the orchard. Suppose we allow another year's crop, or \$1,200 more, to cover this balance, and any unforeseen casualties, errors, or other unestimated expense, then at the end of twelve years we shall have an orchard that has produced enough to repay the first cost of trees, planting and cultivation, and an annual rental of eight dollars per acre. If the orchard should now die would the investment prove a failure? How many farmers make their crops of grain, extending over a period of twelve years, to yield a clear annual rental of eight dollars per acre?

An orchard at twelve years from planting is in truth but at the commencement of its productiveness, and having, upon our supposition, been well cultivated, may now be expected to yield for the next twenty years an average annual crop of four barrels to each tree. This fruit is worth, on the tree, not less than fifty cents per barrel, and in some seasons is worth twenty-five or fifty per cent. more. But we will not increase the estimated value of the crop beyond the sum set down for the twelfth year, and will suppose that the cost of cultivation is now increased to two hundred dollars a year. We shall then be reaping from this twenty acres a clear annual rental of fifty dollars per acre, or the snug little income of ten hundred dollars per annum.

But twenty years is a long time, and perhaps apples will not be worth fifty cents a barrel on the tree during all that period. Perhaps they will not; but do apples sell for any less now than they did twenty years ago? Are you aware that we are each year consuming two hundred and fifty thousand dollars worth of fruit beyond what we produce? and that this excess of consumption over production is steadily increasing? By looking into the trade returns it will be seen that the importation of fruit into Canada for the year 1859 was \$252,000; for 1860, was \$285,000; for 1861, was \$310,000; and for 1862, was \$454,600. During the year 1861 the value of the fruit exported was \$12,258, and in 1862 it was \$18,032, thus showing that in 1861 we imported more than we exported to the value of over \$297,000, and that in 1862 our importations of fruit exceeded our exportations by over \$436,000. How much of this is fruit that might have

been grown in Canada may be inferred from the fact that of this the amount that came from the United States, under the operation of the Reciprocity Treaty, was \$284,600 in 1860, \$309,000 in 1861, and in 1862 \$431,600. There can be no doubt then that we have been consuming in Canada, at a cost to the country that has risen from \$270,000 in 1860, to \$413,000 in 1862, a quantity of fruit that might have been grown by our own farmers. Were we to reduce the amount imported for home consumption in 1862 to apples at the prices allowed in the above estimates, it would be equal to 826,000 barrels of apples, requiring, at the yield per acre above estimated, six thousand eight hundred and eighty-three acres of apple orchard to meet the present deficiency of production. It is no doubt true that a considerable part of this importation consists of peaches, pears, grapes, &c.; how much, it is not in our power to show; yet we know enough to be certain that we are importing or home consumption a quantity of apples alone, that will require many hundreds of acres of orchard to be brought into full bearing before our own home wants will be supplied. And when we shall have succeeded in meeting the full measure of the home demand, what an illimitable field stretches beyond! The fruit growing region—that in which the apple can be produced in perfection—is comparatively very small. The apples of Ohio, of the entire West and South-west, will not keep throughout the winter, as do those of Western New York and Canada. The whole of the vast Prairie country has been found to be not well adapted to the growing of apples. The fruit dealers of Boston, New York, Philadelphia, Chicago and St. Louis, now look for their supply of long-keeping varieties to a few counties of Western New York. Besides all this, away across the Atlantic, the Home Country even now can afford a satisfactory advance upon apples worth a dollar and a half per barrel at our own door. And yet we have made no allowance for increase of population. Are our cities to grow no larger, our villages not to become towns, and our towns cities? The fear, in truth, is not that we shall have too much fruit, but that we shall not be able ever to come up with the demand that has already got so far the start.

But if the price should fall, what then? How much must it fall to make the apple orchard an unprofitable investment? It is not like a fall in most articles of commerce, where a decline of twenty-five per cent. is a very serious affair, and a decline of fifty per cent., involves bankruptcy; but after sustaining a decline of fifty per cent. it will still yield a clear annual rental of twenty dollars per acre. So that in all the contingencies that seem likely to happen, we find that an apple orchard of good fruit, judiciously selected and carefully cultivated, promises to be a desirable investment.

But it is objected that not many of our farmers can afford to spend three thousand dollars and wait twelve years for their returns. This may, indeed, seem to many to be a formidable difficulty, but it is only in the seeming. Only a very small part of this sum is actually money spent. The land is his own upon which the trees are planted, the horses and implements are his with which it is cultivated. His only real outlay is one hundred and twenty dollars for the trees, and perhaps an extra hand on the farm for six months in the year, to cultivate them. He is cultivating twenty acres, against which he writes down for rent \$160, and \$150 for cultivation each year, expecting that at the end of twelve years they will have yielded him a sum equal to the sum total of these amounts in return for the labor he is bestowing. And who that deserves to be called a farmer is not doing the same continually? He builds a barn at a much larger immediate expense, not expecting the cost to be returned until after years of patient waiting. He purchases choice stock at high prices, looking to the improvement of his herd and flock in coming years for repayment. He lays down draining tile at considerable immediate outlay, hoping to reap it again in larger and better crops to be grown in years to come. In like manner he plants an orchard and waits for the returns. If he seem to wait long, is he not well paid for his waiting? A clear yearly income of ten hundred dollars, from twenty acres, that have already paid back all outlay, is worth how many years of waiting?

THE AGRICULTURAL COLLEGE IN PENNSYLVANIA is now in successful operation. It is situated near the Alleghany Mountains. Four hundred acres of land are connected with it. The college building is immense, costing one hundred thousand dollars. The course is four years, and students are educated for practical and scientific farming.