

Garden and Orchard.

Small Fruit Culture.

BY E. COTT.

It is a task not easily defined to state with precision just which kind of soil is positively best for the different classes of small fruits. We doubt not that different results will be obtained by planting the same fruit on different soils, and much more different by planting different fruit on different soils; but to say exactly which is the best for obtaining the best results is a question for scientific and superior investigation. At a former period in our experience, we most decidedly held the opinion that a fine, strong, well-drained sandy loam, rich in vegetable ingredients and not too loose, was the best possible condition of soil for strawberries and raspberries; but later on in our course of fruit culture, and as our observations widened in these matters, our opinion came gradually to a wide and material difference of caste, and now we strongly lean to a preference for a strong and well-drained clay loam for both these fruits, if not too much condensed.

One of our local growers has a small fruit farm established on just such a description of soil as this last, and the results of his plantings are all that could be desired—plenty of fruit, and of fine quality. If there is any advantage in favor of the sandy loam for small fruits, it may be on the score of wintering; for on this soil the plants do not appear so liable to frost and heaving as on the clay soil. The flavor, too, may be very much finer in fruits from sandy soil, but we most emphatically deny that the fruit may be either more or of better quality. Any of our clay loams, therefore, of proper texture and if thoroughly and systematically drained, are clearly suitable for the successful growth and development of small fruit plants and of the finest possible quality of fruit.

With these preliminaries we will at once proceed with our subject in hand, viz.: Character of Soil for Small Fruits; Its Preparation, Culture, &c. By small fruits we shall at present understand to be meant our popular berries, as strawberries, raspberries, blackberries, gooseberries, and currants, and for their successful culture we shall prefer a medium clayish loam, of a dark color and a crumbly texture, and very rich in vegetable matters in composition, and laying on a solid clay subsoil at the depth of from twelve to twenty inches from the surface.

We would prefer the surface to be nearly on a level, or, at the most, with merely gentle slopes to prevent severe washing from heavy and frequent rains. The whole must be thoroughly underdrained by laying at systematic distances hard-burnt clay tile, two inches in diameter in the bore, and from two to three feet under the surface. These drains should not be more than twenty or thirty feet apart, according to the dryness or wetness of the soil, and the whole laid with a careful reference to a good and efficient outlet. The mode of preparation consists in thoroughly cleaning the ground of all annoyances, as stumps, stones, sticks, etc., as impediments to the easy progress of the plow and the cultivator. Before the planting is done the ground must be thoroughly broken up to a depth of ten or twelve inches by good plowing and subsoiling, and after cultivation during the entire summer. For the soil I am now describing being in a virgin state and unexhausted, very little application of artificial fertilizers is required; but if the ground is worn out or in the least depleted of its vegetable fertility, those artificial stimulants must be most certainly applied with unsparing liberality. This application, in the main, must be made during the workings of the summer months.

The after culture consists, in the main, of a thorough and constant moving and stirring of the soil to prevent the effects of summer drouth and the progress of the least tiny weed. This point—the eradication of all weeds—must be most assiduously attended to from the beginning, and the success of the whole operation mainly depends upon the efficiency of this part of the work. Do not consider the weeds merely in the light of a curse, but rather as a blessing in disguise, and go at them with a settled determination of will. In the culture of strawberries for market the planting is generally proceeded with in the following manner:—The ground being, as described, thoroughly prepared, is then marked off in distances of three or four feet apart, entirely across the field, and the plants set in those rows $1\frac{1}{2}$ feet apart. The season for doing this is as early as the ground can

be profitably worked in the spring of the year. You have now your field nicely set with plants, at regular distances 2 x 3 feet apart, or 7,260 plants to the acre. The first season nothing is to be done but thorough cultivation and cleaning, and nothing is to be expected of them but to grow out, occasionally directing the young plants where to root as the runners push out. The object is to cause the young plants as much as possible to root in the rows, and there mass up and keep the spaces between clear for cultivation and gathering the fruit. In this system scarcely any fruit is matured the first year; but in the second year a very large and heavy crop is the result of thorough and patient care, and will amply reward all the labor and expense incurred. This method is continued two or three or more years, according to circumstances, and the whole is then plowed up and planted with some other crop, or the ground is thoroughly manured and again planted with the same fruit.

For planting in the hill system the ground is marked off 3 x 3 feet, or 4,840 hills to the acre, and the plants are carefully set at the crossings in the shape of a triangle, three plants to a hill. This makes a very nice plantation and is carefully and thoroughly kept, cultivated, and cleaned from all weeds, and the runners scrupulously kept closely out off. In this way, large and fine masses of fruit are matured the second year in large clusters around the hills. This system is much more expensive than the first, and nothing but constant watchfulness and labor can expect to be successful with it. The hills must be underlaid with straw as the fruit is ripening, to prevent it being damaged by contact with the neighboring earth, and so making it unfit for use. Both of these systems of strawberry-culture have their stern advocates; but we greatly prefer the first, as it seems more practicable for general field culture in a country like this, where every item of labor is intensely expensive.

For raspberries, gooseberries and currants, the land is prepared as before, and marked off 3 x 6 feet, or 2,620 plants to an acre, and the young plants placed in the crossings. The matter of planting raspberries is very simple and easy, and consists in merely placing the young plants, previously prepared, in their places with a spade and tramping them firm. The planting of gooseberries and currants, however, requires much more labor and care, as the plants used are fine, thrifty, two-year-old plants and have plenty of long fibrous roots that must be carefully placed as the planting goes on. Careful and constant cultivation must not be neglected, and regular prunings must be attended to. Blackberries are planted as are raspberries, but the distance apart for the plants must be far greater, or 6 x 6 feet, being 1,210 plants to an acre. For this fruit, being so rampant and irresistible in its growth, constant and systematic prunings are necessary and cannot be dispensed with for a season. If this is not attended to, neither cultivation nor fruit-gathering can be proceeded with with safety or profit. In a former paper on small fruits I have sufficiently indicated the varieties of these fruits preferable for the purpose of planting. I have, therefore, now nothing further to do in this paper than to throw out some hints on the profitableness of small-fruit culture and the condition of the market.

The demand for small fruits is annually increasing in most of our respectable country markets, and the difficulty of disposing of a fine crop of fruit is annually decreasing. It is this demand in the market that regulates the price of small fruits, as of every other commodity, and consequently determines the question of its profitableness. If a large crop of small fruit, as of anything else, is put upon a flush market, the profit side of the account sinks; but if the same crop can be put upon a keen market, the balance rises in grateful proportions. Again, the question of profitableness is determined by the method of culture, the location and nature of the soil, its location, etc., the skill in management, and the economy of gathering and marketing the crop.

By this it will easily be seen that the question of product is not by any means the only question in the profitableness of the crop. In all cases where the business is studiously and intelligently followed on from year to year with perseverance, good judgment and favorable circumstances, small fruit culture is universally found to pay, and amply pay the painstaking cultivator. Let none, therefore, be discouraged in their attempts, but wherever good, sound taste for the business exists, accompanied by a small amount of

capital at command, and a moderate amount of experience, any one may engage in it with an absolute certainty of being well repaid for their outlay in this direction.

Fruit Raising in New Brunswick.

BY S. L. PETERS, QUEEN'S CO., N. B.

To all lovers of good fruit, and who does not enjoy it, it must be with the greatest satisfaction that they have witnessed the increased attention that is being given to the culture of the many varieties of fruit for which our climate is adapted, and the rapidity with which our markets have been supplied with the most excellent quality of fruit of Provincial growth. It is but a few years ago since we imported about all the really good fruit that was consumed by our people, drawing the supply from our sister Province of Nova Scotia, and from the United States. So impressed were our farmers with the idea that our soil and climate were unsuitable for the growth and production of the better kind of fruit, that it was with the greatest reluctance and misgivings that they were persuaded to make the attempt. That the soil would produce apple, plum, and cherry trees, and give heavy crops of the poorest sort of fruit, they had abundant evidence in the old orchards of natural fruit, planted by the first settlers of the Province, particularly along the sloping banks of the valley of our beautiful river St. John, and its numerous tributaries. Our markets were filled with beautiful apples from Nova Scotia, and with smaller fruit from the United States. Our people were large buyers, and it soon became a question of importance whether we should continue to repeat the large importations of fruit year after year, or make the attempt to produce them for ourselves. We had tasted the sweets and enjoyed the luxury of good fruit, and would be satisfied with nothing short of the best.

Scarcely had the demand been created for grafting fruit trees for the best varieties, when our American cousins (ever on the alert to push their business and take advantage of opportunities) were on hand to supply the demand. Through the persuasive and often eloquent pleadings of agents of the "Rochester," and other nurseries of the United States, large sales were made to our farmers for a few years of the grafted fruit trees they were cultivating, but from some cause (partially, perhaps, from the difference in climate and the want of that proper cultivation and care so essential to the growth of young trees) those who purchased them were sadly disappointed; large numbers of them died the second year after planting, and those that did live made but a sickly growth, and I question if to day, ten per cent of those imported and planted can be found alive.

Nothing daunted by the disaster which attended this attempt to grow fruit trees, and having learned wisdom by sad experience, a small number of our people had the courage to start nurseries in the province, cultivating those kinds which in their judgment would prove the most suitable to the climate. Notable, among those gentlemen, was Mr. E. P. Sharp, of Woodstock, whose efforts in this direction have been very successful, and who, we venture to assert, is entitled to the hearty thanks of our people for the great variety of fine healthy trees he has been able to supply. Mr. Sharp's success soon led others to follow his example, and now we have Mr. Milbury's nursery at Florenceville, Carleton Co.; Mr. Secord's and Mr. Shipp's in Queens, and the Sussex and Albert Co. nurseries. From these nurseries the people bought cautiously at first (in view of their past experience) but as soon as the fact was established that with proper care the trees growing here were sure to live and do well, they at once increased their orders, and it is a fact worthy of note, as showing the increase in fruit culture, that all the nurseries at present established in the Province are taxed to their utmost to fill the orders given by the fruit growers of the Province; while considerable quantities of trees are still sold by agents of Nova Scotia and United States nurseries. Experience has shown us that quite a large variety of apples can be successfully grown.

In autumn fruit we have the Early Harvest, Sweet Bough, Red Astrachan, and Duchess of Oldenburgh, or New Brunswickers, as they are familiarly known with us. The Duchess is, I think, without a rival with us in autumn fruit. Crisp, tender and juicy, with sprightly acid flavor while its rich crimson blush gives it a rich and attractive appearance. The tree is a prolific bearer, and as a September fruit it is exceedingly popular.