

well; nor can it be done at all, without undoing and destroying much that may have been already accomplished.

Having selected a point of outlet for the drainage water at some of the lowest corners, and from whence a sufficient fall or run can be got to carry it off; a main drain should then be led along the lowest side, to receive the water from the lateral or branch drains, which should be so laid out as to catch or intercept the natural sug or trituration of the water in the land, that is always going on from the higher to the lower levels. The drains should be extended through the border of shelter trees on the outside of the fence, which being on the North side of the garden will consequently be the highest, and the point from whence the water proceeds.

In most cases the drains will answer every purpose intended, if dug about three feet in depth; finishing the bottom to a graded slope or run, in the direction to which the land falls. The best materials for permanency are stone, or draining tiles; but no one should be deterred from proceeding because he cannot obtain any one material, as although the materials above mentioned are the most durable, yet good substitutes may be found in either fence rails or brush wood, any of which if well put in and carefully covered with a tough green turf (as all drainage for trituration should be) will drain the land effectually for a period of from forty to fifty years.

The whole garden and tree border outside, should then be subtrenced, to a depth of not less than two feet; preserving 15 inches in depth of the original surface soil upon the finished surface; the subsoil below this 15 inches should be dug and loosened to the desired depth, but left in the bottom of the trench (hence the term subtrencing,) and 15 inches of the soil from the surface of the next trench thrown on the top of the loosened subsoil, and so on until the whole is finished.

The benefits of this subtrencing are manifold; it allows the superabundant water to percolate easily and quickly through the soil to the drains, leaving a deeply loosened porous body of soil fully saturated with moisture, but never to stagnate or get sour. It allows a perfectly free circulation of air, heat, and other atmospheric influences, to pass into and through the soil, more moisture is retained and held in solution during dry weather; the evaporated moisture from the bottom (which in shallow soils is brought to the surface and absorbed into the atmosphere) being absorbed and retained by the depth of soil, in its passage upward, a small surplus only passing off by slow degrees into the atmosphere.

The roots of all plants and vegetables penetrate this loose soil to such a depth, as that even during long continuances of dry weather, they are seldom or never what we would call burnt or scorched; and having a greater range of pasture, they are much increased in size and value. But this is not all, their properties are also quite different; as from being produced upon a soil perfectly drained and ventilated (so to speak) and which allows all the organic elements free scope to play a part in their growth and maturity, we may be well assured that they are as superior to the productions of an undrained, untrenched, sour soil, as a man who feeds upon good, wholesome, well prepared food, and lodges in a well drained, well ventilated house, taking sufficient exercise, is superior to a man who lives upon inert matter, and lodges in an ill drained, ill ventilated house, taking little or no exercise. (The cultivation of the surface represents exercise.)

When the trenching is finished and the surface brought to a graded level, the walks should next be marked out. Cross walks may be put in to divide into convenient sized quarters, but one main walk all round the garden, at about from 9 to 12 feet from the fence inside is essentially necessary, because the borders next the fence being on some sides the warmest, and on others the shadiest, should be occupied with all kinds of small early and late crops, to cultivate and to gather which, it is necessary to have ready access at all times from a main walk.

Gooseberries, currants, and raspberries, with probably a dwarf pear in each corner (to break the sameness which would otherwise prevail) should occupy a border of about 5 feet wide, round each quarter, the bushes to be set in one line, about 6 feet apart, along the centre of this border; the black currant and gooseberry in the shadiest places. Raspberries should have a situation open to the sun most part of the day, as otherwise the wood will be winter killed. They may be planted 3 feet apart in line. Strawberries will do best in one of the open quarters, they should be renewed by re-planting every second or third year, and always on a fresh quarter. Rhubarb and asparagus may be advantageously planted in two exposures, the one in the sun, and the other in the shade; by attending to this, the season of these most excellent vegetables will be prolonged. The