

must destroy the herbage on at least an equal radius, or eighty feet in diameter; or in other words, a space equal to the planting of eight trees fully its equal in productiveness and foliage. 1st. Because a conical tree with its base near the ground throws but a small shadow, and next, by the spaces between them increasing an area as we ascend, every portion of them is equally exposed to light and air.

3rd. Trees with a long trunk are much longer coming into bearing. The pear on its own stock as a standard, varies with the kind from eight to twenty. Trained as a pyramid, its period of bearing is lessened from four to twelve years. The Seckel and Urbaniste, upon pear stock, and with a stem of five feet, are not unfrequently fifteen years producing their first fruit. With low pyramidal training, and a slight attention to summer pruning or pinching, this tedious and discouraging delay is most certainly shortened to seven or eight years. How considerable is this addition to the short life which the Great Gardener vouchsafes as to the cultivation of his soil! Were it proper to admit within the limits of this essay, the new and striking results of *root pruning*, I might show how even this short period might be lessened nearly one-half. And lest I may seem obnoxious to the charge which lies at the door of the editors of Agricultural periodicals and theoretic essayists, of saying fine things which need the proof extended and practical experiment, I may here assert, that no position in this essay has been taken, which has not already been substantially and satisfactorily proved with hundreds of trees on my grounds.

The cause of the precocious fruiting of pyramidal trees is, First, that the sap checked by the summer pinching in its flow to the terminal bud, is distributed to the wood buds below, and sufficient nutriment is received to mature them into fruit buds. Second, that the energies and material eight or ten years growth is not wasted in forming a needless trunk, before they can be applied to producing fruit branches.

A certain age of bark and cellular woody formation of a branch is necessary, before it will cause the sap to flow slowly enough to concentrate into fruit juice. Now if the earlier branches formed, are entangled, it is evident we must protract the fruit bearing period. Besides, the pruning away of so much wood forces an abundance of sap to the terminal buds, and its energies are spent in wood growth at the expense of fruit bud formation.

When, however, branches start from or near the ground, having the same age with the trunk, fruit buds are formed long before they could have been on long trunk trees; the sap is more evenly distributed, wood growth is moderately checked, and the cultivator's eye is gladdened with the golden fruit.

At this time of our local prosperity and individual freedom from pecuniary cares of so many successful business men, Nature is asserting her claim to many a man's affections, by unappeasable yearnings for country life. But life with many of these citizens, —turning farmer and fruit raiser,—is already more than half spent, yet still indefinable longings to taste the fruit of their own planting, tug at their heart strings and purse strings. "I can only plant for my children," is his half sad, half complaining conclusion, as he looks at the ancient and shattered orchard, where the memory of fruit is a thing of the last generation. To him, and to all, the new Pomona offers the opportunity of seeing silver blossoms and golden fruits follow in quick succession on the small trees he doubtingly, yet in duty plants. Let him study Nature's silent lessons, for wisdom crieth not in the streets; let him watch her exact but quiet processes, and assist but not distort her workmanship, and he shall see new effects and rich successes crown his labors with delight.

Let no pruning knife amputate the first fruit bearing arms she stretches forth, but gently check in its young growth the errant straggler; supply its roots bountifully with proper nutriment, and there is no man who leaves the weary city, who may not hope to see fruit hang upon the tree he has planted.

4th. The size and quality of fruit is much increased by this cultivation and training of the tree, and nothing has delighted Horticulturists more during the last few years, than this fact. It has long been known that young trees produce larger fruit, but deficient in flavor. Old trees produce fruit of fine taste, but constantly decreasing in size. We combine both these excellencies, and rid ourselves of both these faults by the conical training. In the low compact form, when an excessive quantity of fruit has set, it becomes an easy task to thin out the overplus, and concentrate the sap in that number which can be perfectly matured.