

Fig. 1—This Shows How Roots Are Cut at Digging Time

Branches should be arranged about the main stem or axis of the tree, so that eventually they may occupy the whole space and provide for its symmetrical development. If three branches are wanted they should be so arranged that, if looking down from the top, these branches would form three angles very similar to each other. More than that these branches should arise one above the other. Such a tree is not liable to injury from snow or wind; and the union between branch and stem is more stable when arising one above the other, than it would be if all branches arose from the same place. By referring to figure two all this will be clear. By cutting the leader, near the topmost branch, we at once provide for an open centre and start the tree off according to our ideal.

It may be regarded as a rule that when

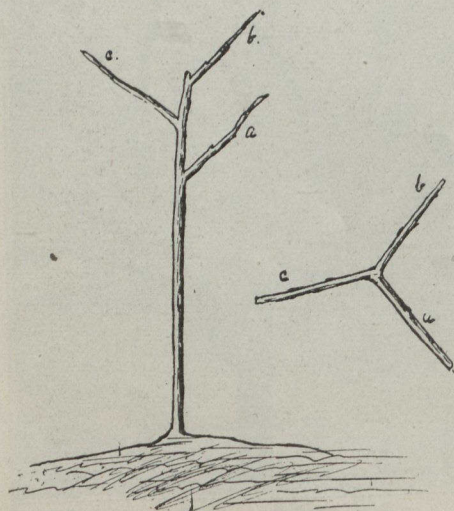


Fig. 2—The Tree at Planting Time

a limb is cut back, unless the cut is made just above a strong lateral, two or more branches will develop into shoots. Two or three of these shoots are allowed to grow on each of the previous year's limbs to form an additional framework for the tree. These shoots should be selected as before, one near the end and the other two farther back, so that the development of crotches will be impossible. These shoots are again shortened as in figure three, and not more than two allowed to develop from each the next year.

THE FRAMEWORK

The framework of the tree should now be well formed and will require less attention from this time on. Keep in mind your open centre. Take out all branches which would interfere with your plan. Remove all surplus branches and all which rub, cross, or tend to form crotches. The reason for all this is quite evident upon a moment's reflection. The tree is not concerned with the production of fruit, but with the reproduction of the

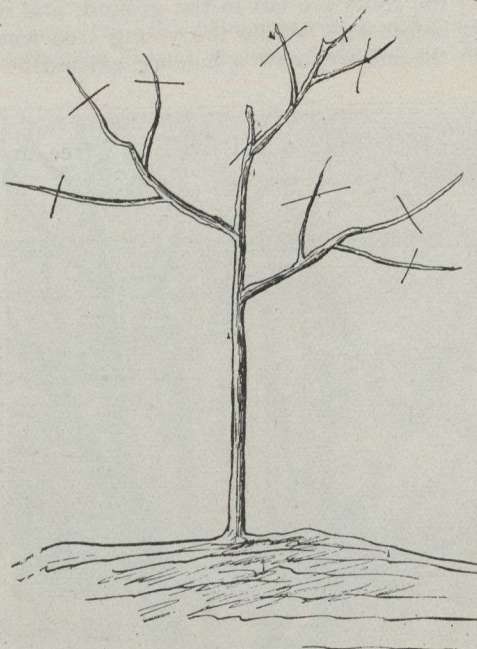


Fig. 3—Plan of Tree After One Year's Growth.

species. It is this towards which plants bend their every endeavor. The size and quality of the fruit are of no moment, but the number of seeds is of great importance from the standpoint of the tree. Bearing this in mind we see why two apples are borne on a branch where there should be one from the grower's viewpoint, and why both are small and unmarketable.

To get first-class fruit it is often necessary to thin, but the process is slow and costly. We are beginning to find that it pays better to thin the tree and the fruit often takes care of itself. When branches rub each other canker like swellings are often produced, and the inner tissue always laid open to the entrance of spores of plant disease.

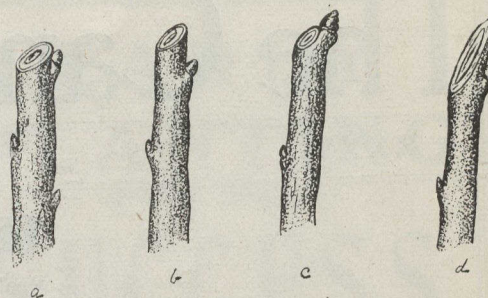
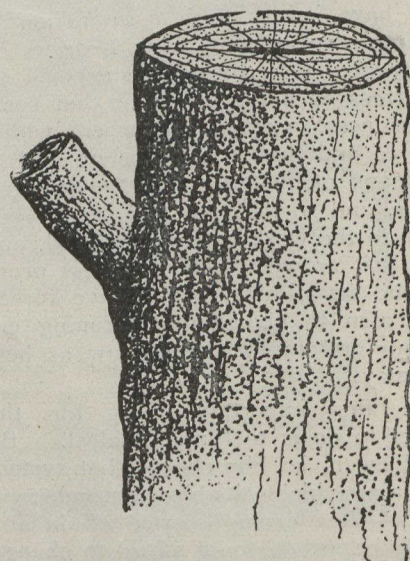


Fig. 4—'A' Shows the Correct Way of Cutting Off a Shoot and 'B,' 'C' and 'D' Wrong Ways.

If the pruning involves the removal of annual growth the branches should be cut just above a bud. If this is done the wound heals readily without paint or covering of any kind. If made below a bud the stub dies back to the bud—unsightly to say the least—and provides a means of access for various fungoid pests. Figure four shows how the shoots should be cut.

REMOVING LARGE BRANCHES

If growers have exercised the care outlined, the removal of large branches is seldom necessary. It is not reasonable to expect that this will always be done, so that the removal of large branches is a problem which always confronts the grower. I know of one grower who always cuts these large fellows about one foot from the main stem. He found these convenient in climbing the trees, he said, as it obviated the necessity of a step ladder. These leafless and branchless stumps have no life in themselves. The only chance for this stub to be healed in is from the activities of the trunk and this is so far removed from the end of the stump that the healing is seldom witnessed by the man who made the wound. Neither should the cut be made at right angles to the branch, but should conform to the tree trunk. The wound is thus larger, but all parts are in intimate relation with the trunk which supplies the



Improper Pruning. A Long Stub