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The Benefits of Winter and Summer Pruning Compared*

By Dr. C. D. Jarvis, Conn. Agricultural College (formerly of the Guelph Agricultural College)

PRUNING is a natural process. It may be observed on both fruit and forest trees. In the struggle for existence the weaker branches, or those unfavorably located, die and drop off. An attempt, often successful, to heal the wound takes place. The modern practice of pruning is an attempt to assist nature and to improve upon her crude methods.

The objects of pruning are three in number. The primary one is to reduce the struggle for existence among the various parts of a tree so that the remaining portion may produce larger and better fruits. Pruning, therefore, is a thinning process, the beneficial effect of which may be readily demonstrated by the cutting out of about half the brush from a neglected apple tree. The process includes the removal of dead or diseased parts as well as of superfluous living branches.

The second recognized object of pruning is to control and modify the shape of trees. Pruning, therefore, is a training process. It commences when the tree is in the nursery now and may continue throughout its life.

Finally, pruning is practised on account of its effect upon the formation of fruit-buds and leaf-buds. The physiological processes concerned in this are not well understood, but it is well known that pruning during the growing season produces an entirely different effect from pruning during the dormant season. A heavy pruning of the top during the winter tends to produce wood, because the same amount of root energy is concentrated on a smaller top. The pruning of the root has the opposite effect, tending to lessen the production of wood, because the same amount of top receives a smaller supply of the stored up energy of the roots and a smaller supply of the soil water with its plant food constituents.

THE IDEAL IN PRUNING

In the pruning of the apple tree there are two distinct styles or ideals, the central leader type and the open centre type, each with its corps of adherents. There are many supporters of the central leader type among the western growers, and they claim that a tree pruned in this form makes a stronger structure and is not so likely to be

broken down by wind and heavy crops of fruit. This is a strong argument and cannot be ignored. A tree of this type, however, is inclined to grow too high and completely shuts out the light from the centre of the tree.

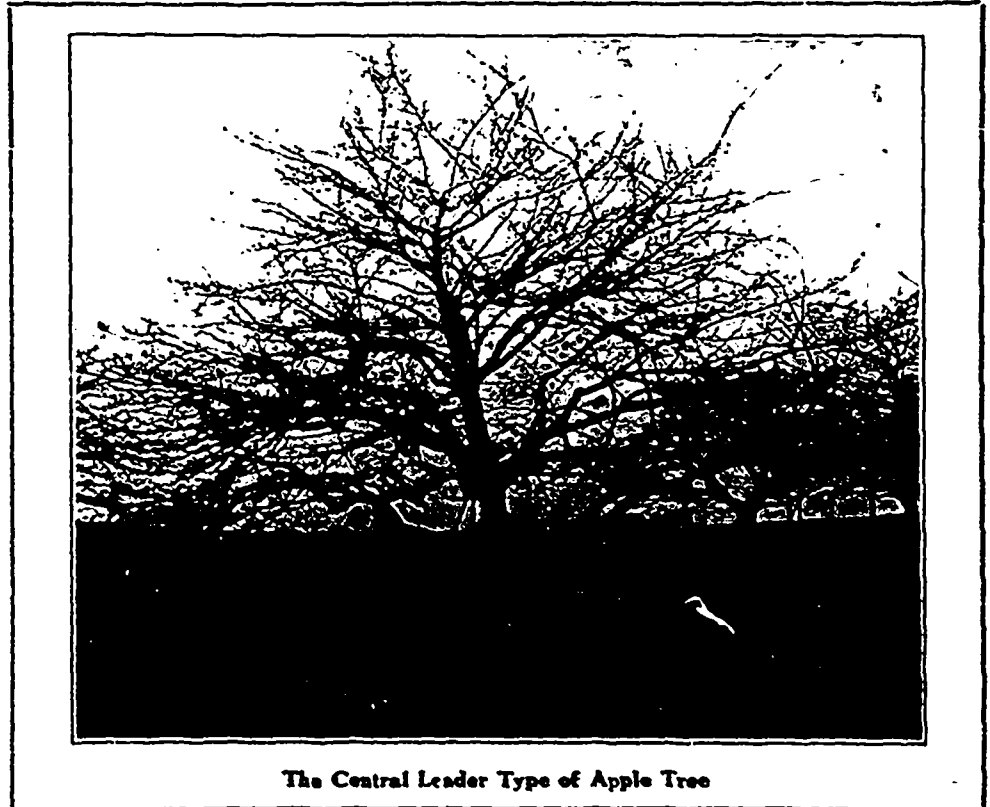
The open-centre type of tree is the one most commonly found in the commercial orchards of the east. For New England, where the maximum amount of sunshine is necessary to develop fruit of high color, this seems to be the most desirable type. If carefully grown and properly trained, and if the trees are not allowed to overbear, there is not likely to be much trouble from the breaking of the branches.

In order to develop a strong open-centre habit, we must have a good nursery tree to start with. We hear a great deal nowadays about the desirability of growing low-headed trees, and I am a strong advocate of such practice, but I do not believe in heading them so low that there is no room for the proper distribution of the main or scaffold limbs of the tree.

Many nurserymen are making a mistake in "rubbing" their trees too high;

by this I mean that all the buds and shoots are rubbed off from the yearling tree to a point six or eight inches below the point where the tree is headed in. If the practice is to head a tree thirty inches from the ground, the "rubbing" should not extend more than twelve inches from the ground, leaving a space of eighteen inches for the proper distribution of the scaffold limbs of which there should be from three to five. These should be fairly evenly spaced along the central axis and no more than one should be allowed to develop at the same point.

An apple tree is a wonderfully tractable object when handled properly. The man who follows the ordinary practice of severely pruning down the dormant season only, is going to have trouble for the more we prune at this season of the year the more persistent the tree becomes. To encourage the development of the weaker growing branches and to check the persistence of the stronger ones, it is necessary to do some pruning during the growing season. This subject will be discussed more fully under the head of Summer Pruning.



The Central Leader Type of Apple Tree

*An address delivered before the Massachusetts Fruit Growers' Association.