

PRUNING

The APPLE TREE

T. S. WEIR



Though not perfect, this tree has no serious faults. The scaffold branch Mr. Weir has hold of was a second leader which would have formed a weak "V" crotch. It had been cut five years before to an outside branch, thus making it a fairly satisfactory scaffold now. The retarding effect of the pruning of this branch tended to strengthen the crotch.



PRUNING AND TRAINING THE APPLE TREE

When Should the Young Tree Be Pruned?

The training of the young tree should start when it is first planted in early spring, before it starts to grow. If no training is done for three or four years, conditions develop that cannot be corrected without more or less injury to the tree. Follow-up pruning should be done while trees are dormant and should be completed in early spring before any growth has started.

A little summer pruning is permissible under certain conditions such as when side branches tend to outgrow the leader. They can be cut back or possibly just the ends pinched off.

Can Two Scaffold Branches Be Selected the First Year in All Cases?

The example in figure 2A shows two scaffold branches selected the first year. This is *not* always possible. In some cases it may be possible to select three, but often only one, and occasionally it may not be practical to select any the first year. As the leader continues to grow, additional scaffolds are selected in the second and later years. Since *each bud* on the leader *could become a side branch*, it is possible to do a certain amount of selection in the bud stage.

At What Height Should the Lowest Branch Be Selected?

The lowest branch should be selected at about two or three feet from the ground, but this is largely a matter of personal choice of the grower. The location of a branch does not rise as the tree grows but the direction gradually tends to become lower with age. That is, upright branches gradually become more spreading from their own weight and the weight of fruit when they begin to bear.

How Many Scaffolds Are Enough?

The number of scaffold branches may vary with circumstances or the personal preference of the grower, but from five to eight is a very good number to aim at. The lowest branch is selected first and the second should be selected 6 to 12 inches above it and from a quarter to half way around the trunk; the third should be 6 to 12 inches above the second and so on—each preferably a quarter to half way around the trunk.

Will the Leader Continue to Grow Upward Indefinitely?

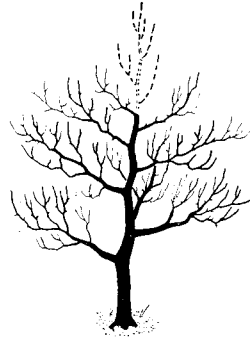


FIG. 6

Varieties with a very strong growing leader such as Haralson will eventually become very tall. After a full quota of scaffold branches has been selected it is desirable to "head back" the top. To do this the central leader should be cut or "interrupted" after it has reached a desired height—about 8 to 12 feet. The cut should be made just above a branch.

Do the Branches Require Training?

The branches should be trained too. If they tend to grow too erect, as in varieties like Whitney, some directing is possible. By cutting to an outward growing bud (figure 7A) or a side branch (B) the growth will be directed outward. Inward growing shoots (C) should be cut out.

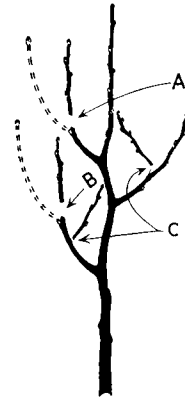


FIG. 7

Should the young scaffold branch tend to be too nearly horizontal it may be directed upward by cutting to an upward growing bud or side branch (lower branch figure 8).

The young branches should be watched each year for unequal growth. A side branch that outgrows the leader or the other branches should be "tipped" or cut back in order to keep the tree properly balanced. See upper branch in figure 8.



FIG. 8

Why Are Narrow-Angled Crotches Weak?

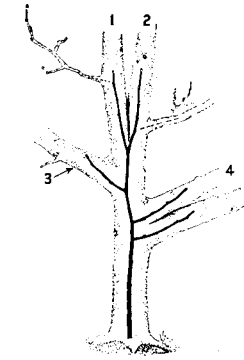


FIG. 9

There are two undesirable kinds of weak crotches. Figure 9 represents the young tree (in heavy black) as being surrounded by new wood added over a period of years.

The "V" angle at the top made by branches 1 and 2 is the result of two leaders. Instead of strong wood binding the two upper branches together there is bark separating them.

Varieties such as Hibernial are noted for strong right-angled crotches like 3 in figure 9.

A second weak condition results when branches are attached too close together on the trunk—4 and 5 in figure 9. They illustrate the need for wider spacing. Each one by itself would be a strongly attached branch but the expansion of growth has caused crowding. There is no longer room for both. The lower one would probably split off.

Why Not Two or Three Branches at the Same Level?

Two or three branches from the same level need have none of the faults of figure 9, that is, they may have wide angles and have no other near branch above or below, but another weakness may occur. Such branches tend to shut off the flow of sap to the leader, as shown in figure 10. Such a condition may stunt the leader or so weaken it that it may die.

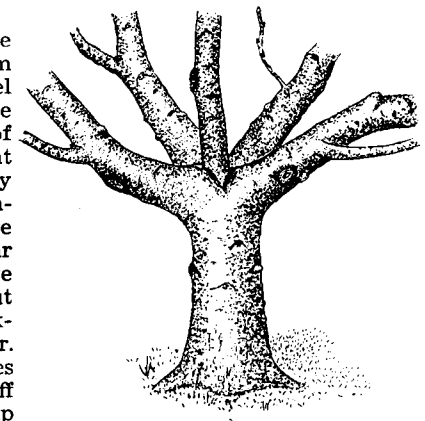


FIG. 10

Pruning Tools

Surplus small shoots could be taken off with a strong sharp knife, but a good pair of hand shears are easier to work with and do a better job. The 9- or 10-inch size, if the blade is kept sharp, will make good, clean cuts rapidly and easily. For older trees, a lopping shear with two-foot handles is very good. These loppers will cut branches up to an inch and a half, but a saw is best for wood over an inch.

For most jobs a light swivel-bladed saw is very good. The blade is about 15 inches long and is replaceable. With the swivel feature, the blade may be turned at any angle for sawing in difficult places. Double-edged saws should be avoided. They are a menace both to the trees and the operator. The pole pruner often saves much climbing, but it is difficult to make good, clean cuts with them. A chisel often comes in handy. Keep all tools sharp. They are easier to use and do better work.

The home orchardist with a few trees could do all necessary pruning with a sharp knife and a saw.

Making the Cuts

Never leave a stub (figure 11A). Always cut flush with the trunk or branch (11A & B). Such a wound has a good chance to heal over, but stubs will decay and infect the heart of the tree.

In sawing off heavy branches, an undercut should be made first as shown (Fig. 11B), some little distance from the trunk. Then cut from above or just a little beyond. This will leave a short stub. Then cut off the stub. Otherwise much damage may result from splitting or tearing of the bark.

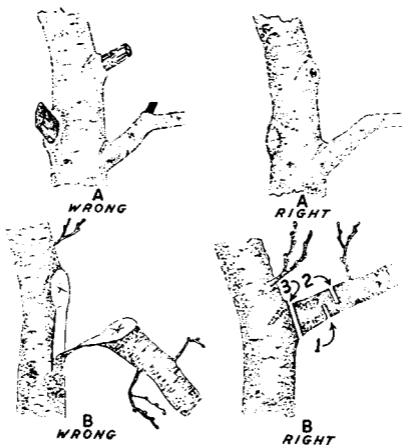


FIG. 11

Painting the Wounds

If the tree is in good vigorous condition, wounds under two and a half inches will heal over in a few years with no ill effects. Many so-called wound dressings retard healing. There are several preparations

that are good for tree wounds. Some of the best are grafting wax, asphalt paint, bordeaux paste, and shellac. Fastest healing takes place under a shellac dressing.

The Mature Tree

After the training period, the first three or four years, very little pruning will be necessary. As the tree gets older, the growth in the center will be shaded by the denser outside. To "release" the center by cutting out vigorous branches will delay bearing and reduce yields. It is best to take out the weak growth. Such weak wood produces small and poor colored fruit anyway—if any.

Other necessary pruning should include:

- All dead and broken wood.
- When two branches cross, one should come out.
- Where two branches are competing for light with each other, take one out.
- Water sprouts—the very fast-growing vigorous shoots that often grow up in the center of the tree especially near old cuts.

The Older Neglected Tree

Old trees that have had little or no pruning will be a mass of brush, probably with some dead limbs, and certainly with many dead and weak twigs, especially in the center.

Such trees may look hopeless, but many can be pruned to advantage if they are in good vigor.

It is too late to select proper scaffold branches, so one would need to work with what is there.

Older trees will have a mass of dead and weak wood on the inside where shade has suppressed the growth of such parts.

Growers should resist the temptation to cut out the vigorous branches to "give the weak ones a chance." These weak ones might in time be "pepped up" but at the expense of several crops. The best thing to do is to cut out first all dead and broken parts, then cut out weak, droopy branches, that is the branches from the scaffolds. It would be wise not to try to thin out a neglected tree all the first time. Better take two or even three years to complete the job. Too severe a thinning would result in water sprouts and thus invite fire blight. A well-placed water sprout in old trees can be a good thing. Save it to grow into a branch.

The height of old trees can be lowered somewhat by cutting back. Such cuts should be made at a crotch. If new growth starts near the cut it can be thinned to a shoot or two and a year or two later the remaining old wood above the cut can be pruned off.

UNIVERSITY FARM, ST. PAUL 8, MINNESOTA

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension

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