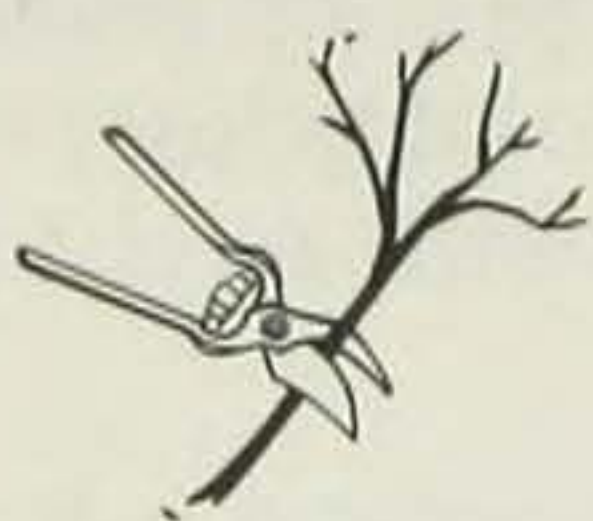
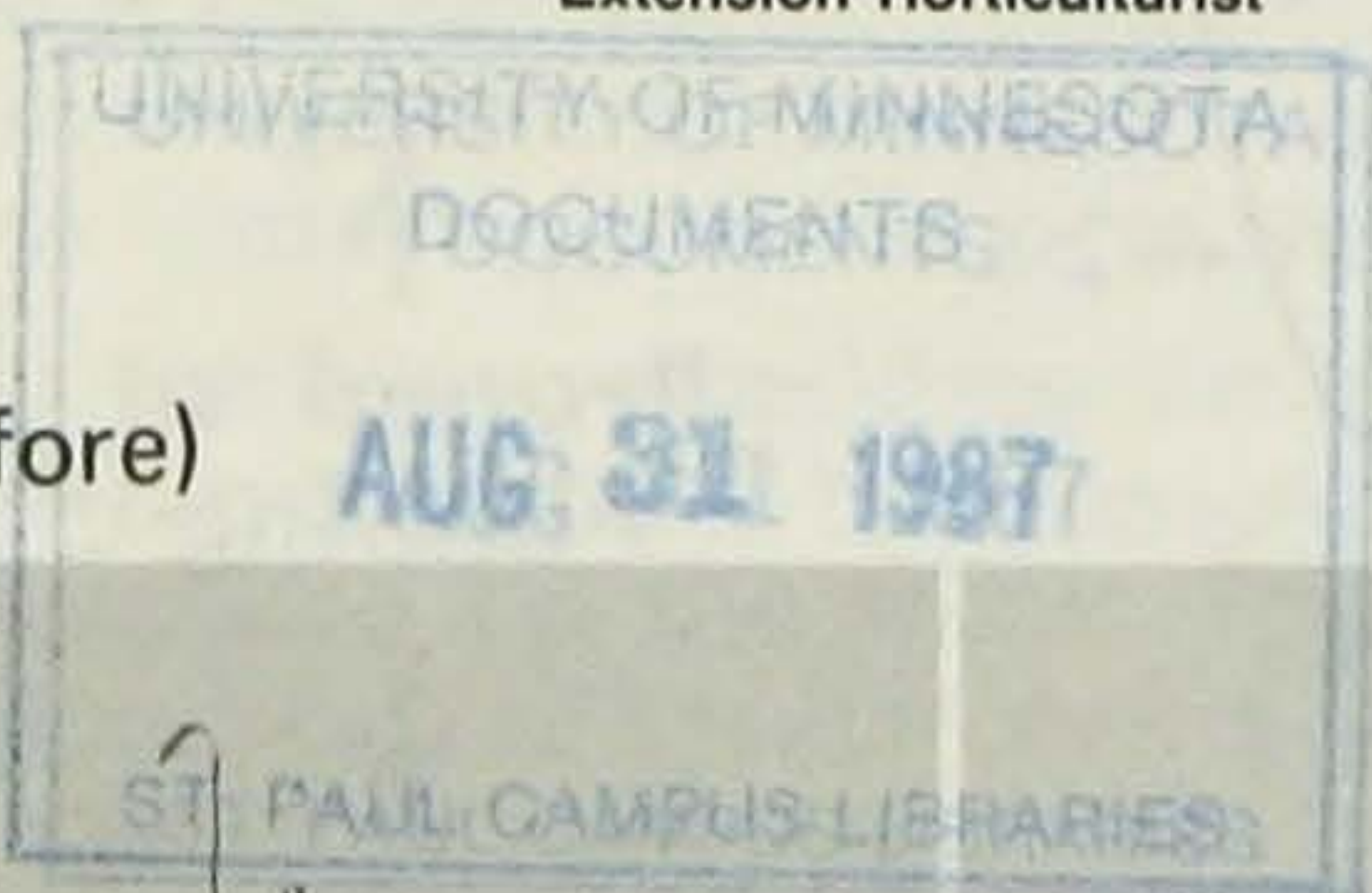


Pruning Fruit Trees



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(Before)

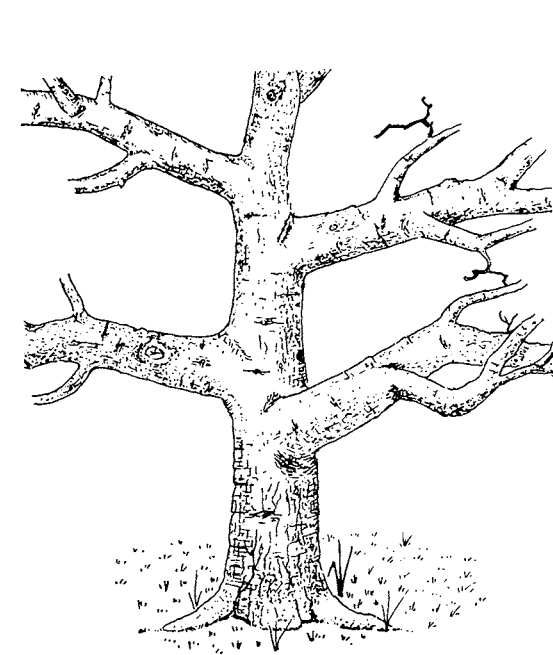
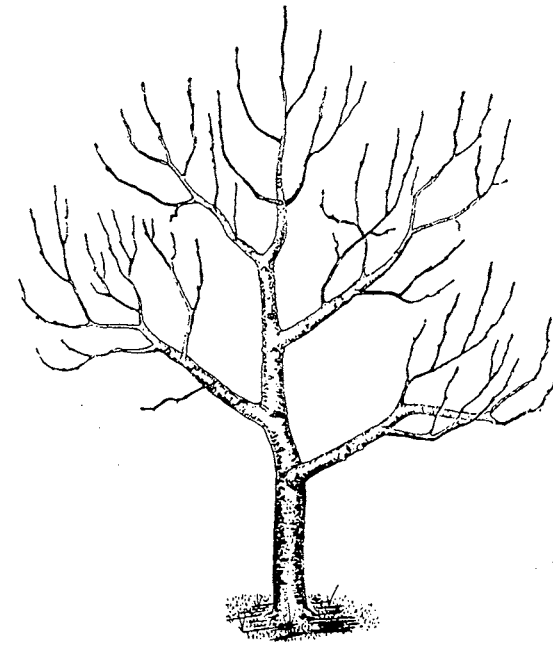
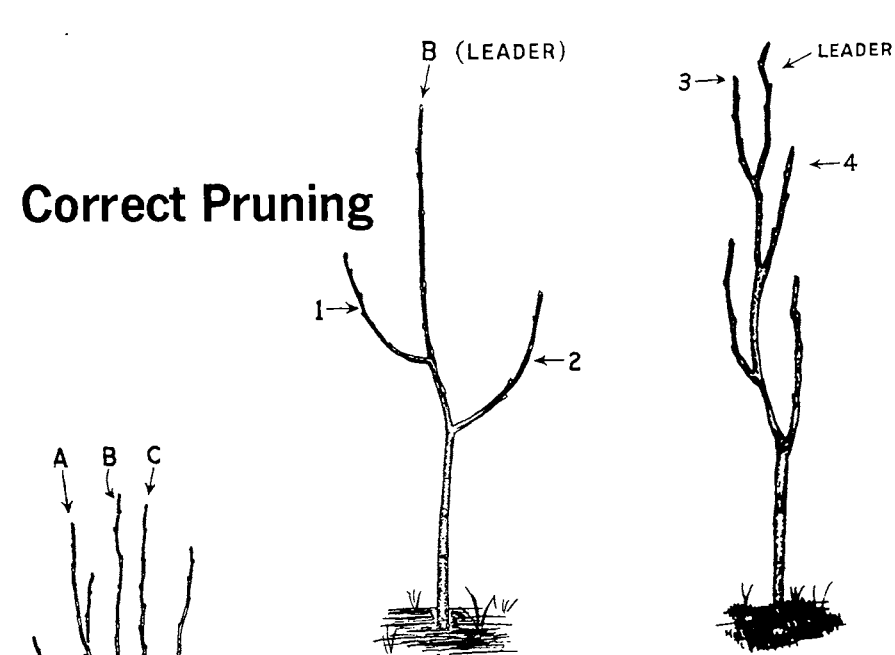
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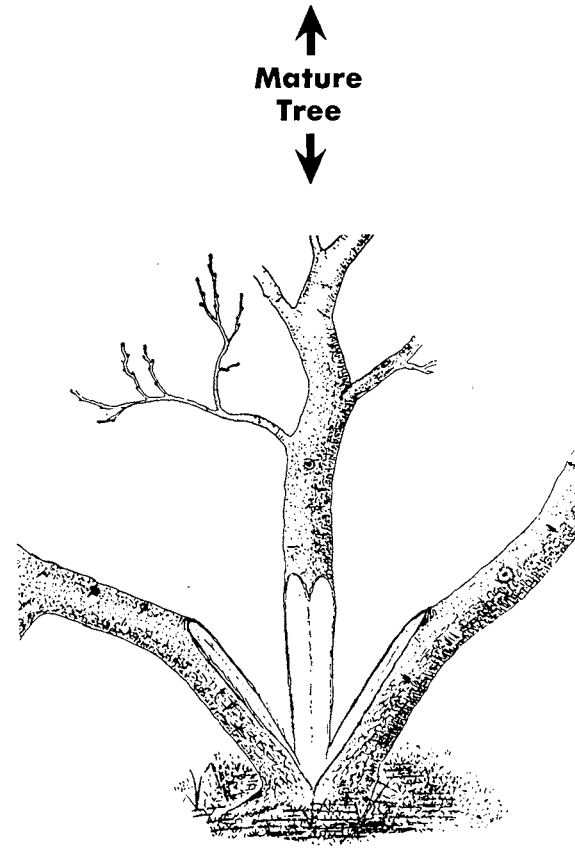
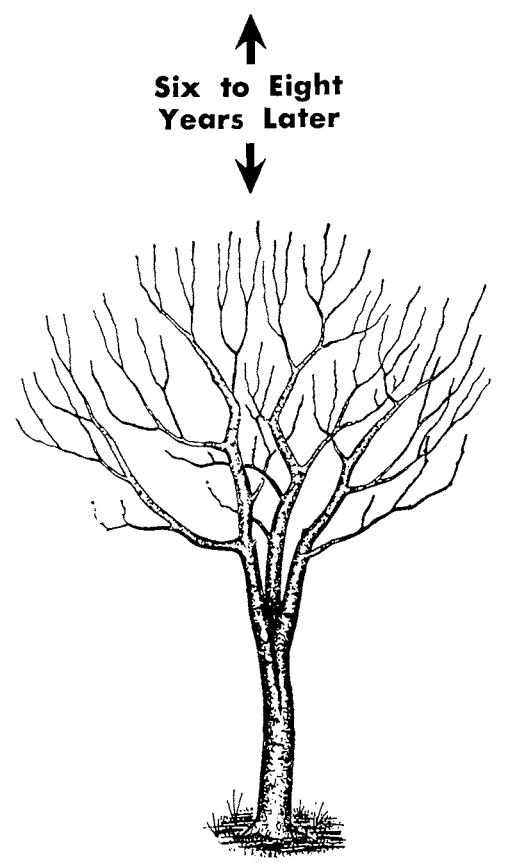
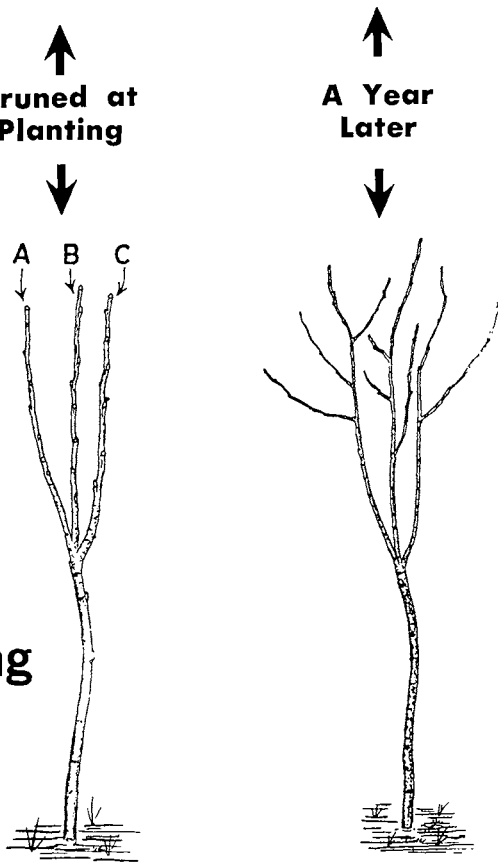
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Correct Pruning



Nursery-Grown Tree

Incorrect Pruning



Six to Eight Years Later

Mature Tree

Hints on Pruning

Pruning Tools

There are many kinds of pruning tools available. Hand tools provide good, economical pruning equipment for the orchardist and the home fruit grower. Each tool will perform well if it is properly used and the cutting edges are kept sharp.

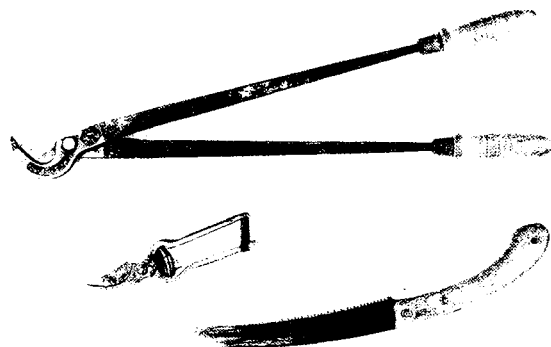


Figure 1. Hand shear (A), pruning saw (B), and lopping shear (C)

For young trees a hand shear (A) is very good. In selecting a shear, a well made 8- or 9-inch shear of good quality steel makes snug cuts for light pruning.

For larger cuts a hand pruning saw is best. One of the best is the curved saw (B), which cuts on a draw or pull stroke and works fast on large limbs. The lopping shear (C), with 2-foot handles will cut branches up to 1½ inches in diameter.

The pole pruner and the pole saw will make cuts high above the ground, but these are not always clean cuts. They do save climbing and can be useful if handled properly.

When to Prune

Start training the young tree as soon as it is planted. At this time the root system has been reduced from being dug in the nursery. A careful pruning not only helps compensate for loss of roots but also begins to shape the tree properly.

Prune in the dormant season when the leaves are off. Late winter or very early spring—before growth starts—is best for rapid healing of pruning wounds.

Making the Cuts

In cutting off a branch or shoot, make all cuts close to the member from which the part is cut. **Never leave stubs.** This is even more important with large branches.

An important precaution in removing large branches (Figure 2) is first to **undercut** the branch a foot or two from the trunk (a). Then cut from above at a point an inch or two out from the undercut (b). After the branch is off, cut off the stub (c).

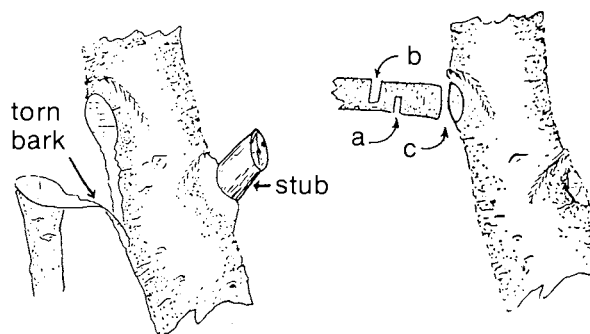


Figure 2. wrong

right

Some training can be done by positioning the cut. Upward-growing shoots or branches can be partly directed outward by cutting just above an outside bud or branch. A downward-pointing branch can be directed upward by cutting back to an inside- or upward-pointing bud. (figure 3)

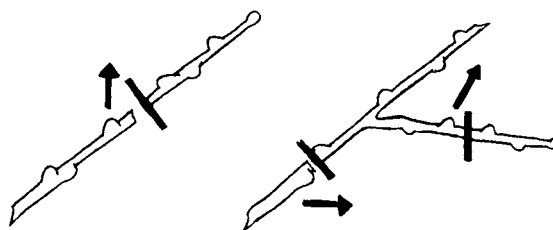


Figure 3.

The arrows indicate the direction of growth when cuts are made as suggested

Painting the Wounds

Pruning scars less than 1½ inches in diameter need no dressing. Larger wounds take longer to heal and may benefit from a dressing. Many substances can be used but the dressings with an asphalt base, often called "pruning paint," are preferred. Water base paints are also satisfactory.

Pruning Young Apple Trees

Pruning young trees tends to dwarf or retard growth. Nevertheless, this is an important practice for the young tree to get the right start. To prune properly, a definite objective is necessary.

Trees may be trained in many different forms. The popular form of the apple tree today is the **central leader** type. Its chief characteristic is the central trunk with scaffold branches growing from it. One of the best examples of the leader type is the pine tree.

The trunk should be definitely larger than the branches, and the branches should be well separated up the trunk. The lowest branch should be 2 to 3 feet from the ground, but this is a matter of personal choice.

A variety with wide-spreading branches should have the first branch starting higher than one with upright branches.

If non-branched trees are planted, cut them 36 inches above the ground at planting time.

Two year-old trees received from the nursery will have several branches, each not more than about 3 inches apart. They will also have one, two, or more leaders, the upward top shoots of the tree. Cut off all but one of these leaders. If there are two or three leaders, they form narrow v crotches where they join. Such crotches are weak and tend to break in a storm or under a heavy crop of fruit.

After choosing one leader, select the first or lowest branch for your tree. It is important that all these scaffold branches have wide angles where they join the trunk. (See illustrations at far left).

The 1st year of training usually produces a tree with one branch—occasionally two—and

a leader. Cut back very long leaders to about 20 inches. New lateral branches will grow from the leader next year. From these you can choose another scaffold branch or two. As the tree grows older and higher, cut the top off at about 10 feet. Make such a cut at the junction of a lateral branch. This form is then known as the **modified leader**.

Five to eight scaffold branches are enough for a tree. The space between branches should be 8 to 18 inches, and the branches should be evenly distributed around the central trunk. If certain branches are longer than the others, prune them back severely. When the permanent scaffold branches are selected, it is permissible to let other branches grow. Remove these branches in a year or two before they interfere with proper development of the permanent branches. Avoid branches with narrow crotch angles, if possible.

Pruning Mature Apple Trees

Young wood grows rapidly (as much as 40 inches) and old wood grows slowly (as little as 2 inches) during the year. The caliper of young wood is thick and old wood is thin. Young wood points upward, but old wood droops. Young wood is straight and unbranched, while old wood is crooked and branchy. Young wood bears large fruit of good color; old wood bears small, poorly colored fruit.

When trees become old, they are generally less productive. They might produce good fruit if nitrogen fertilizer is applied and if they are pruned properly. If such trees are very tall, it will pay to cut back the tops to 12 to 14 feet in height. (Up to 4 to 5 feet of growth can be removed in 1 year.)

The older tree that combines old, weak wood with some good growth will benefit by judicious pruning. Cut out the weak, thin wood. Cut out any shoot growth that is pulled down by former fruit crops or is shaded out by stronger shoots. The lack of sunlight will weaken or kill a tree branch just as the forest will shade out and kill grass. Like-wise, remove water sprouts each year as they are non-productive.

Cut old wood out when it begins to weaken instead of letting it continue producing smaller and more poorly colored fruit. The strong new growth remaining will produce fruit similar to that of young trees. In other words, the object is to have young wood on the old tree.

It may be necessary to cut out whole branches if they are too crowded, because it is important to let in light to the lower part of the tree. Old neglected trees may require more than 1 year for such a renovation. If a whole branch is cut out, it is called **thinning**. If it is cut back a part of its length, it is called **heading back**. Both operations are necessary in treating old trees.

Bearing shoots often have too many old spurs. If such wood is "headed back" a half or even three-quarters, the number of fruiting spurs is lessened but the quality of fruit is improved.

Many old trees bear only in alternate years. It is best to prune heavily just before the heavy-bearing year. If fruit buds can be recognized, much thinning of the crop can be done in the pruning operation.

Pruning Other Fruits

Pears

Train the young pear tree at planting to the same pattern as recommended for apples. Once the young pear tree is established, prune only lightly. The branches of most pear varieties and some apple varieties tend to grow upright, so they need to be spread. Cutting back to outward buds or shoots is not a good way to do this, because soft new growth is subject to fire blight.

To spread the tree put wooden "spreaders" in or near the crotches or tie the branches down or outward. (Figure 4). Pear trees are very slow to begin bearing. As trees reach 5 to 6 years of age, such tying down or bending of the upright branches tends to start fruit buds.

Plums

Young plum trees may be trained in much the same way as young apple trees; using the modified leader method.

The newly planted trees should be pruned in the spring just before growth begins. If unbranched trees are planted, cut off the shoot about 3 feet above the ground. If branched trees are planted, one or two branches with the lowest about 2 feet from the ground are selected, as the beginning of the main scaffold limbs.

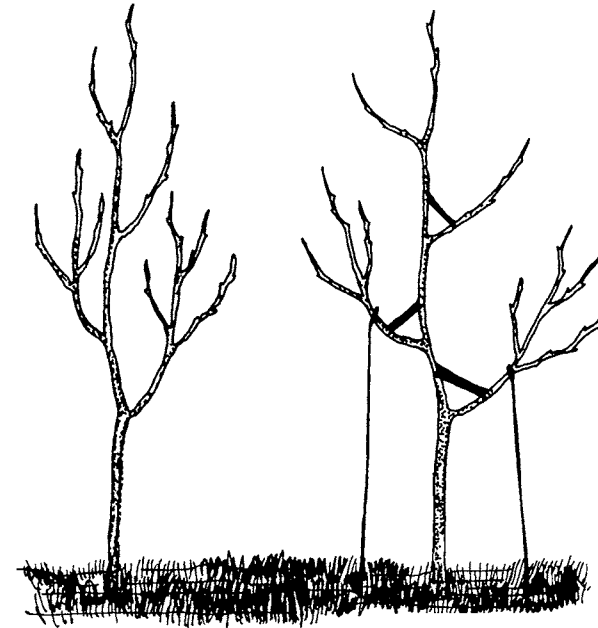


Figure 4. Before and after the use of spreaders and tie-downs, which are used on both apple and pear trees.

The ideal European-type plum tree such as Mount Royal has a central leader (main trunk) and 6 to 8 well spaced (5 to 10 inches) scaffold or side branches. Remove all narrow crotches and dead and diseased branches, and thin excessive growth. The hybrid plums such as Superior are usually a little more vigorous. They grow in a somewhat spreading fashion and will need some heading back as well as thinning of excessive growth. Avoid heavy pruning of plums.

Very old plum trees are difficult to renovate. Old apple trees, if cut back severely, will readily produce new shoots, but this is not true with old plum trees. Any heading back of large

branches should be done at a side branch or shoot.

Sour Cherries

The modified leader type is best. Because sour cherries require little pruning, prune them as little as possible to avoid retarding production once the desired branches are selected.

In handling sour cherries it is important to note that the buds are large and prominent. Careless handling could rub off or damage many buds.

Cherry-Plums

These sand cherry hybrids-Sapa is an excellent example-bear when 2 years old and produce wonderfully for their first 3 or 4 years with little or no pruning.

After that, production and size of fruit are greatly reduced. They are short-lived plants at best. A 15-year-old tree is past its prime and perhaps no longer productive.

Cherry plums are small trees. When young, pruning should be aimed at cutting back shoots to reduce the crop, avoid breakage, and encourage new growth.

Later eliminate old wood and encourage the production of new bearing shoots. If this program of renewal is started early, it can be done with small cuts. If delayed, it will be necessary to make large cuts which may start rots in the wood.

Apricots

Apricots are usually pruned to the central-leader system suggested for plums. Apricots are borne on short spurs that are productive up to 3 years. Considerable thinning-out pruning should be done to induce annual production of new fruiting spurs.

Other Stone Fruits

The Nanking cherry should not be trained as a tree. It is a bush and should be headed very low. The pruning should be aimed to produce vigorous shoots of new wood. This is best done by severely thinning out old wood as soon as

signs of age or slow growth appear. With this fruit it is best to thin out whole shoots rather than head back shoots.

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For Proper Pruning

- Use only sharp tools.
 - Prune when the tree is first planted.
 - Prune in late winter or very early spring before growth starts.
 - Never leave stubs when you prune.
 - Undercut all big branches before pruning.
 - Be sure that the trunk is larger than the branches.
 - Make sure the branches are well separated up the trunk.
 - Prune so that the lowest branch is 2 or 3 feet from the ground.
 - Always choose branches with wide crotches.
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