

## RAISING THEM RIGHT

By Carol Ponchet-Cassidy

For many years in my horticultural career, I sold fruit trees. The trees were all between one and three years of age. One of the most frequently asked questions was how to prune and train the trees when they were young.

It was always at that time that I would find myself making the analogy that raising fruit trees was similar raising children. Children require careful nourishment, support and discipline during their critical early years. The same can surely be said about young fruit trees. Fortunately, the needs of a fruit tree are much simpler and less individualized than those of a child.

In this article I will focus solely on free-standing apples and pears, as they have similar growth habits and training systems. Peaches, cherries and plums are generally pruned and trained to an open-vase style whereas apples and pears, also called “pome” fruits are most often trained to a free-standing, *central-leader training system*.

A central-leader training system entails a single, vertical trunk with the branches radiating outwards, resembling a Christmas tree (see diagram #1). The pruning and training suggestions that follow can be applied to your young tree until it reaches the desired height, whereupon (as I’ll mention later on in this article) there are a few options available to control the height.

Winter has arrived and you find yourself facing your young, leafless tree, pruners in hand. Fruit trees should always be pruned from the top down so that you don’t break any branches that have already been pruned. Therefore, begin your pruning by dealing with the *central-leader*.

The central-leader is the top-most branch on the tree. It emerges from the trunk and is (hopefully) quite vertical. There may be several branches competing for the position of leader, but, as we all know, “a true leader stands alone”. Before removing the competing leaders, draw an imaginary line straight up, starting at the base of the trunk. Which ever branch is closest to the line will be this year’s leader (see diagram #1).

Before you remove the competition, you may find that there are branches that you would like to keep, but they’re just too vertical. If this is the case, there’s a nifty pruning trick called a *bench cut*. Normally, when we remove a branch, we make every effort to neatly remove the branch right up to the branch collar. The collar is the swelling at the base of the branch. With bench cuts, we intentionally cut parallel to the ground and leave a wedge of wood from the branch protruding beyond the collar (see diagram #2a).

The wedge of wood you leave behind will produce several new sprouts during the year. Next winter, you can thin out these sprouts, leaving the best placed branch (see diagram #2b).

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Now that the competing leaders have been removed, it's time to "head-back" or shorten the leader. Go to your imaginary vertical line. Probably, your leader will be to one side of it. Cut the leader back by half, just above a bud that is pointing towards your vertical line (see diagram #3). Think of the buds as little directional signs. Whichever way they point, is the direction the branch will grow. The branch that will grow from that bud will be next year's leader. As well, the buds that are below your cut will sprout into new branches.

Here's one of the options available to you to control the height of your fruit tree. Years later, once your tree has reached its desired height, remove that year's leader, choose a replacement leader, remove all competing branches and don't shorten the new leader. Leave it as is and the overall vertical growth will slow down. Each following winter, repeat the process.

If your tree doesn't have many branches developed yet along its trunk, then there's another special trick that you can do to stimulate more branch development. Rather than cut the leader back in winter, leave it and wait until the leaves are flushing out in the spring. Then tie a soft rope (old stockings work well) to the top of the leader, bend it over as far as you can and tie your rope down to the tree's trunk or a stake or rock (see diagram #4).

This technique stimulates the tree to produce more branching further down its trunk. Leave the leader bent over until next winter. You will notice that during the growing season, among the many branches that will grow from this bent leader, one of them will become the new leader for the following year. You will have to remove all the growth beyond it (see diagram #5). If enough new branches have developed along the trunk, then you can start cutting the leader back each year. If there are still not enough branches, then bend the new leader over again.

This technique of bending the leader back is also an effective option for controlling the mature height of the fruit tree.

Now, step back and look at the tree as a whole. While it is young, our goal is to develop what is called a *scaffold system*. A scaffold system is, simply put, the framework or bones of the tree. Generally, a scaffold system on a central-leader tree should have its branches radiating outwards from the trunk. They should also be set in tiers on the trunk.

Let's say, your first tier of branches starts at 2 ½ feet from the ground. Four branches per tier are plenty. Ideally, there should be one foot of clear, branch free trunk between tiers. Remove any branches within these spaces.

Once you're done, you should have a tree with a shortened (or bent in the spring) leader and well defined, clear branches on the trunk. Some of these branches may be quite long and need to be shortened. If these long branches are relatively flat, cut them back by half to a bud that is pointing towards the sky (see diagram #6). The branch that will grow from this bud will be more vertical, but, as it matures and starts to bear fruit, it will flatten out and have a stronger angle with which to support its fruit-load. If some of these branches are more vertical, either remove them using a bench cut, or cut them back by half to a bud pointing outwards, rather than up.

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It's an exciting process, raising a young fruit tree. It's fun to see the results of your pruning and training from the year before, and reap the harvest of fruit every fall. Raising a young fruit tree, just like raising your child, can, at first seem daunting, but with experience and the rewards that follow, nervousness dissipates to be replaced with pride and confidence.





