

Training First Leaf Trees

Proper scaffold selection is important to minimize scaffold failure. While most growers understand the need to space scaffolds properly around the tree, many fail to space scaffold limbs properly up and down the trunk. Any scaffold limbs originating in the same plane (at the same height) will have a weak attachment and are susceptible to splitting out in later years. Ideally, we want three – five inches of vertical space between each limb. That means if you select four scaffolds, the topmost and bottommost limbs should be a minimum of 10-12 inches apart.

The angle a limb is attached to the trunk is also important. Bark sometimes becomes imbedded at the base of shoots that are very upright. This leads to weak attachment of the limb and it will likely split out when the first heavy crop sets. Limbs that are too flat tend to lose their vigor and will be overcome by the rest of the tree. Ideally we want to choose primary scaffolds that originate about 45 degrees from the trunk. Unfortunately the ideal tree rarely exists!

Oftentimes the largest, best looking limbs on a one-year-old tree are the very top two or three shoots. Unfortunately, these shoots are fairly upright and originate close together on the trunk. RESIST the temptation to keep more than one (preferably none) of these limbs. This is ESPECIALLY true with ALDRICH AND PADRE trees because of their very upright growth habit. You are much better off selecting smaller shoots that are spaced correctly up and down the trunk than large shoots that are too vertical or that originate at the same height on the trunk.

How many scaffolds should I keep? Although I am still a fan of retaining only three scaffolds, I don't think the quantity of scaffolds is nearly as important as the quality. This is especially true in high density plantings where trees won't get as large as widely spaced trees. In my almond tree spacing and pruning trial, the farther apart the trees were spaced, the more the trees were susceptible to breakage. Therefore scaffold selection is most important in widely spaced orchards (less than 110 trees per acre). In addition, selecting only three scaffolds will make it easier to limb shake when widely spaced trees get too large to trunk shake in later years.

Grower interest in minimal pruning has recently increased. In my local trial, we had more problems with splitting trees where we did no scaffold selection. Again, I don't think the NUMBER of scaffolds was the major problem – it was the failure to select properly positioned scaffolds. When you do no scaffold selection, you will always have some poorly positioned limbs and these are more susceptible to breakage. My suggestion to those considering minimal pruning is to properly select scaffolds during the first dormant season and then think about reducing your pruning in later years.

A few hints for the first growing season which may help with your first dormant pruning:

- Top trees at 36 – 40 inches at planting time. Some nursery catalogues suggest topping newly planted trees at 28 - 32 inches. This is too short for almonds. If

you want a trunk that is two feet high for shaking and you need another 12 inches for proper scaffold spacing (see section above) newly planted trees can't be shorter than three feet tall.

- Don't strip off too many shoots above the carton during the first growing season – you may be sorry when it comes time to select your scaffolds. The more shoots you leave on the developing trunk, the thicker the trunk will be at the end of the season.
- Summer prune vigorous first leaf trees – a little bit. Don't take off more leaf area than you need to and don't try to make all your scaffold selections at that time – you don't want to limit your options later. Cut off the topmost two or three shoots. This will allow the better angled shoots below to get larger and will eliminate the temptation to keep the top upright shoots during the following dormant pruning. This is especially good to do with Aldrich and Padre.
- Keep your young trees growing vigorously. Overly weak trees have very flat primary shoots. In this case, summer pruning is probably not a good idea.