

Pruning at Planting

Pruning should start at planting to correct poor structure by reducing stems that compete with the dominant leader. Reduction and removal cuts at planting direct future growth into the leader (Figure 1). The pruned stems grow slower. As a result, the aspect ratio (branch diameter compared with trunk diameter) is smaller 4 years after pruning (center) and much smaller 10 years after pruning (right), making the union strong (Figure 2). Trees with good structure do not need to be pruned at planting.

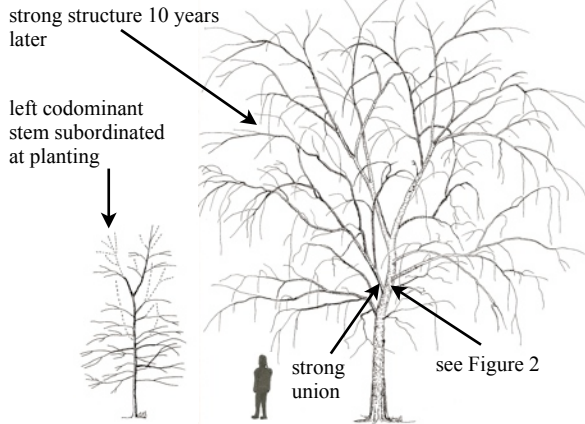


Figure 1. Prune at planting to reduce stems that compete with the leader (top left). Branch subordination over 10 years leads to strong, stable unions, and trees that are easy to maintain. Tree on right 10 years later needs subordination to improve weak structure at the fork halfway up the trunk (top right).

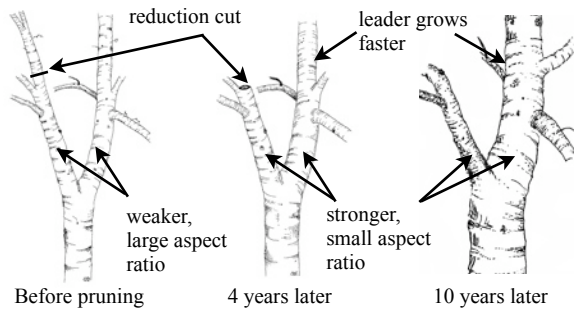
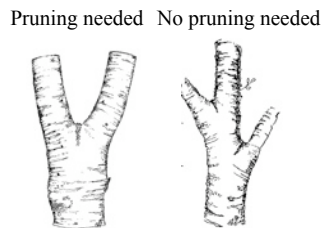


Figure 2. With pruning at planting, aspect ratio improves as the tree grows.

Structural pruning that starts at planting leads to strong union development when employed over a 10 year period. Even young (pencil size) stems whose diameter is the same (or nearly so) as the leader that occur in the top half of the crown should be subordinated or removed. Branches lower in the crown with a large aspect ratio should also be subordinated or removed (Figure 3).

Figure 3. Focus pruning efforts on branches with a large aspect ratio (left); those with a small aspect ratio can be left intact (right), even those on the lower trunk. Remove low branches as needed for clearance.



Use reduction cuts where possible on larger nursery trees to subordinate branches that compete with the leader (Figure 4). Some upright stems and crowded branches can be removed entirely back to the trunk. Heading cuts may need to be used on small diameter branches to direct and subordinate growth.

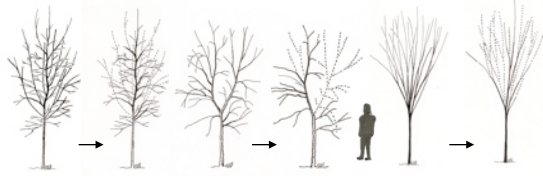


Figure 4. Prune for structure at planting to encourage the leader.

Without pruning, codominant stems at the top of recently planted trees continue to grow. The result is weak structure on a sizable tree 10 years later (Figure 5). The aspect ratio remains the same over 10 years (Figure 6).

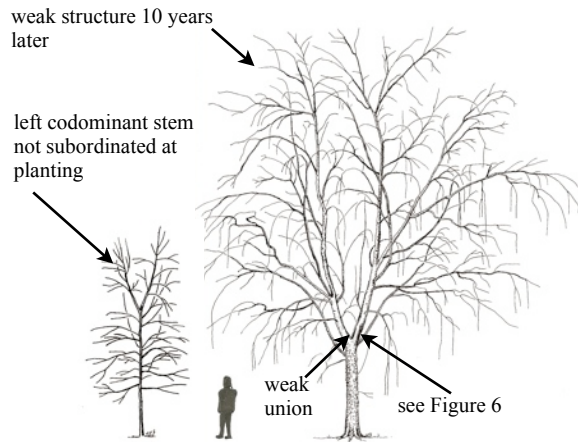


Figure 5. No pruning at planting. Codominant stems remain 10 years later without pruning at planting.

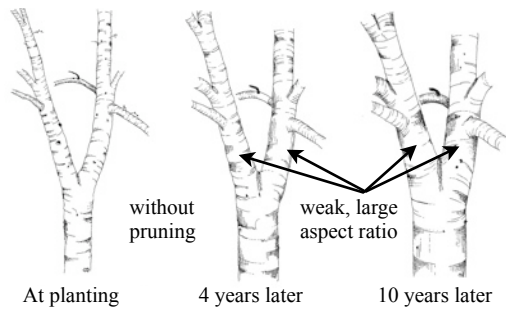


Figure 6. Without pruning at planting, the large aspect ratio remains weak 10 years later. Contrast with Figure 2.

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