

Pruning Young Trees

Proper pruning is essential to develop a tree with a strong structure and desirable shape. Trees that receive the right pruning when they are young will require less corrective pruning as the tree matures.

There are a few simple principles people should understand before they set out to prune trees:

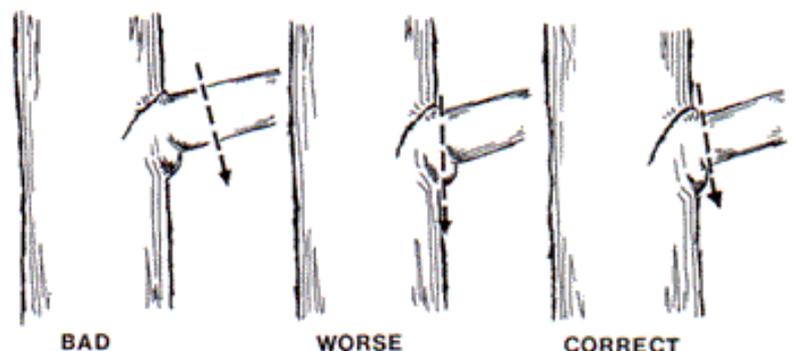
- Each cut can potentially alter the growth of a tree. Before removing any branches have a purpose in mind of what you want to achieve.
- Proper technique is essential. Poor pruning can last the lifetime of a tree. Learn where and how to make the correct kind of cuts before picking up the pruning tools.
- When a tree is wounded it must grow over the wound. Unlike us, who can heal a wound, the tree can only grow over it. This means the wound is in the tree forever. This is why it is important to prune a tree correctly and at the right time.

Pruning tools

When pruning trees it is important to have the correct tools for the job. For small trees, most cuts can be made with secateurs. The scissor or by-pass type is preferred to anvil pruners. They make a cleaner, more accurate cut. Cuts larger than 2cm in diameter should be made with a pruning saw.

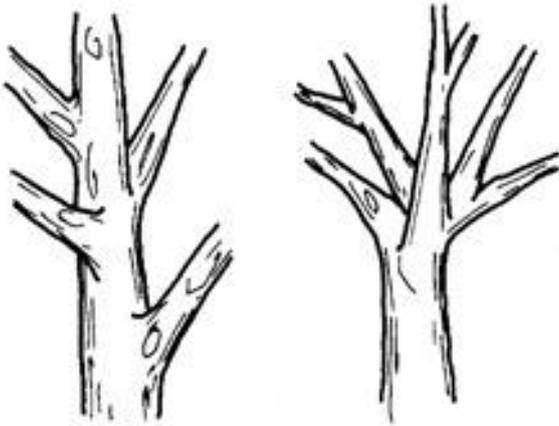
Making the cut

Where you make a pruning cut is essential to a tree's response in growth and wound closure that it is done so correctly. Pruning cuts should be made outside the branch collar. If you remove part, or the entire branch collar, the tree will be unable to seal the wound correctly which could lead to internal decay.



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Establishing a strong scaffold structure



Branches should be well spaced radially and along the trunk as shown in the tree on the left.

A good structure of primary and secondary branches should be established while the tree is young. The scaffold branches provide the framework of the mature tree. Properly trained young trees will develop a strong structure which will require less corrective pruning as they mature.

The goal in training young trees is to establish a strong trunk with sturdy, well-spaced branches. The strength of the branch structure depends on the relative size of the branches, the branch angles and the spacing of the limbs. This varies depending upon the growth habit of the tree. Some trees have a conical habit; others have a strong central leader, while some have wide, spreading canopies with no central leader.

Good pruning techniques remove structurally weak branches while maintaining the natural form of the tree.

Trunk development

For most young trees it is important to maintain a strong, single, dominant leader. Do not prune back the tip of this leader. Do not allow side branches to grow out of this leader.

Sometimes a tree will develop twin stems. This can lead to structural weaknesses, so it is best to remove one stem while the tree is young.

The side branches contribute to the development of a sturdy, well tapered trunk. It is important to leave some of these low side branches in place, even though they can be pruned out later if you wish.

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Selecting a permanent branching structure

Nursery grown trees tend to have lower branches which make the tree appear more proportioned when young. Unfortunately, low branches are rarely appropriate for large grown trees in the urban environment.

How a young tree is trained depends upon its location and the activities going on around it. Trees grown in the highway verge must be pruned to allow sufficient clearance to allow pedestrians and vehicle unobstructed passage. Trees that are going to be used to screen an unsightly view or to act as a windbreak can retain their lower branches.

The spacing of branches, vertically and radially is also very important. Branches selected to be permanent scaffold branches must be well spaced along the trunk. Branches should retain radial balance with branches growing outward in each direction. Avoid allowing two major branches to grow immediately one above the other on the same side of the tree.

Some trees have a tendency to develop branches with narrow angles of attachment and tight unions. As the tree grows the bark can become enclosed deep within the union between the branch and trunk. This is known as included bark. Included bark can weaken an attachment and lead to branch failure. You should prune branches with weak attachments when the tree is young.

You should always avoid over thinning the centre of the tree's crown. The leaves of the tree produce food to keep each branch alive and growing. Each branch contributes food to keep the stem and roots fed and growing. If you remove an excessive number of branches you can potentially starve the tree. In addition, if you over thin the centre of the crown you allow more sunlight into the upper stem which can scorch and damage the tree. Over thinning also unbalances the shape of the crown, placing more weight on the ends of the branches. As the tree grows this could lead to branch failure. A good rule of thumb is to maintain at least half the foliage in the lower two-thirds of the tree.

Newly planted trees

Pruning of newly planted trees should be limited to corrective pruning, such as removing broken or torn branches. Other formative pruning can be done in the second or third year. The belief that trees should be pruned after planting to compensate for root loss is an outdated one. Trees need their leaves and shoot tips to provide food and the substances which stimulate root growth. Unpruned trees establish faster, with a stronger root system than trees pruned at the time of planting.

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For more information contact:

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