

PRUNING FOR QUALITY TIMBER PRODUCTION

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INTRODUCTION:

Most of the stem of tree is covered with branches during the early stage of its life. Though some of the branches drops off gradually as the tree matures (self pruning), but many of which persists and tends to become thicker with age. These braches make the stem wood knotty and reduces the timber quality. In addition, the presence of too many braches also reduces the height increment of the stem. Therefore, it is imperative to remove branches from major portion of the tree stem to produce knot free timber. The knot free timber is high in strength and quality and fetches higher price and is also more likely to be used for items with higher longevity thereby assisting carbon sequestration. Artificial pruning refers to selective cutting of branches of the tree for improvement of health, form of tree or quality of its timber and sometimes, used for cutting branches for productions of new shoots. Most of hardwood species are likely to require pruning to achieve their maximum potential timber value.

WHAT TO PRUNE?

- Dead, dying or diseased: Dead or dying or diseased branches should be pruned as it can be source for infection or pest to the other important part of the tree.
- Numerous stems: Retain one main vertical stem, which is strongest and straightest, preferably located at the Centre. Remove all other stems.
- Rubbing branches: Prune those branches that are rubbed or crossed with each other. The conjunction of the braches creates a weak point at the union that could break and fall at any time.

WHEN TO PRUNE?

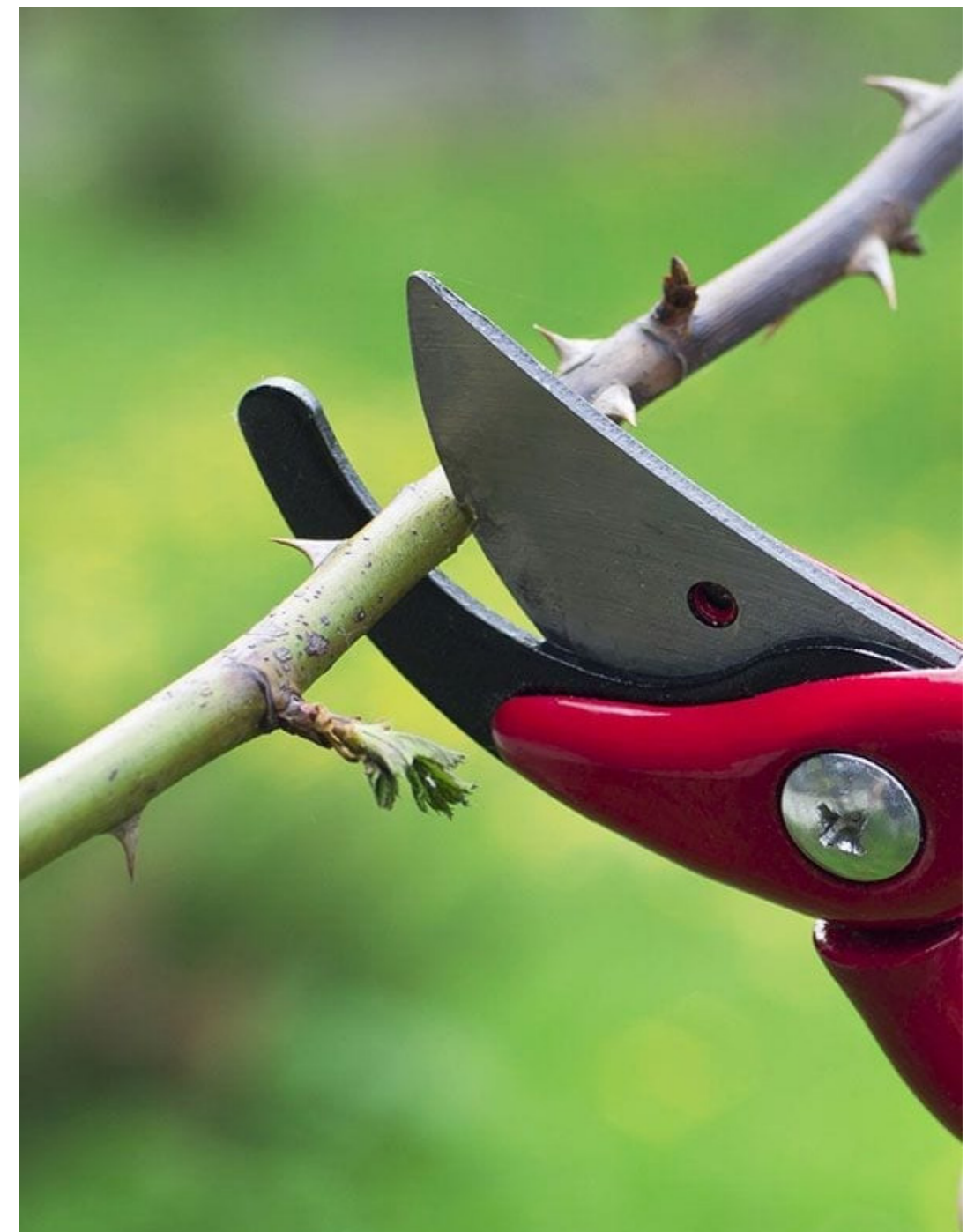
- Dead, dying and diseased branches can be prune in any part of the year.
- Usually late winter is the optimal time to prune most of the forest tree species since the plant is dormant and there is less chance for disease and pest damage. But there may be some exceptions. However, the least desirable pruning time is immediately after new growth develops in the spring.
- The pruning of tree should be avoided during the active insects or disease months of the tree species.

HOW MUCH TO PRUNE?

Not more than twenty five to thirty percentage of the tree canopy should be removed in a year. Pruning more than thirty percentage of the tree total canopy in a year exert stress to the tree and affects its production. However, pruning can be done more than the specified percentage if there is a large amount of dead, diseased or dying branches.

OPTIMUM AGE FOR PRUNING:

The lower branches play an important role in overall stem growth and development in the initial year of plant growth. So these branches should be removed only after 3-5 years of planting when you see a flare at the base of the stem near the soil.



TECHNIQUES TO PRUNE A TREE:

- Pruning cuts should be made on the branch just outside the branch collar without tearing off the bark. Branch collar is the swollen region adjoining the tissue between the main stem and the branch. The branch collar comprises of callus tissue that seals the pruning wound and prevents disease and decay. The pruning cut should be made in such a way that leaves the branch collar intact and undamaged.
- Use clean and sharp pruning tools.
- Thinner branches with a diameter of 2 cm or less can be pruned with the help of a secateurs or a two handed pruning lopper.
- For pruning branches more than 2 cm in diameter three cut method is used. Thicker branches can be carefully pruned off with the help of pruning saw There are three steps to be followed in this method:
 1. The first cut should be made on underside of the branch, approx. 30 to 40 cm away from the trunk. The cut should be made approximately half way through the branches.
 2. The second cut should be made on top portion of the branch about 7.5 to 10 cm further away from the first cut. When this cut is made the branches will break between the two cuts due to weight of the branch.
 3. The third cut should be made on the remaining branch at the right outside the branch collar. The three cut method reduces the tearing of the branches and thus pruning damage by reducing the weight of the branches while pruning.