

WHY DO WE PRUNE FRUIT AND NUT TREES

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There are several different reasons why we prune fruit and nut trees. During the first few years a lot of effort goes into developing the tree trunk and strong framework branches so they will support a crop. When the tree begins to bear a crop, most pruning effort goes into balancing the crop load. At maturity, fruit trees must receive maintenance pruning to produce a high quality crop and to renew fruiting wood. The following notes were prepared as a guide to help you understand how and why trees are pruned and how trees respond to pruning.

1. When planting bare root trees, prune them back -
 - to encourage low branching so some of the crop can be harvested without use of a ladder
 - to balance roots with top growth - up to 90% of the root system can be lost from a tree when it is dug from the nursery row and sold bare root consumers.
2. Pruning is used to select framework branches at the end of the 1st, 2nd, 3rd, etc., growing season until tree is of mature size.
3. Prune out branches from center of the tree so light can reach bearing surface located in the lower areas of the tree. This is done during the training years and every year while the tree is in production.
4. Maintain tree for ease of harvest and pest control.

TWO TYPES OF PRUNING CUTS ARE USED

1. Heading back - occurs when a branch is cut back part way to either a bud or a small side branch that is much smaller in diameter than the branch.
Heading back is used when bare root trees are planted and every year while a young tree is being trained. It is used to develop desirable branching for the framework of the tree.
Heading back is also used on apricots, peaches and nectarines to reduce the length of last season's shoots to regulate cropping and reduce fruit thinning requirements.
2. Thinning out is the removal of complete branches. It is used in young tree training to remove undesirable branches. In mature trees, thinning out branches will often eliminate duplication, rubbing and crossed branches and give better light to fruit that develops on the remaining branches. Thinning out is also used on mature walnut trees to permit renewal of the fruiting wood.

HOW DOES THE TREE RESPOND TO PRUNING

1. Pruning has an overall dwarfing effect on trees and plants. Total growth will never be as great after a tree or plant is pruned.
2. Pruning invigorates tree growth - the length of shoots will be greater after the tree is pruned, but the number of shoots and total growth is greater if the tree is not pruned.
3. Pruning stimulates bud break
 - it is used to stimulate desirable branching of young trees
 - will renew fruiting wood on mature trees
 - it causes undesirable water shoots to develop in center of tree and at top of tree

PRUNING BEARING FRUIT AND NUT TREES

1. Before you start pruning, you need to understand where the fruit or nut flowers are borne. Are they found on -
 - last year's shoots - peach, nectarine, plum, almond
 - spurs - apple, pear, cherry, plum, walnut
 - current season's growth after pruning - fig, pomegranate, persimmon
 - current season's growth and last year's wood - fig
2. Some trees need most of their bearing surface removed each year - apricot, peach, nectarine, and some plums.
3. Others have spurs which will bear for several years - apple, pear, walnut
4. Spur-type trees (apple, pear) may take several years to become fruitful - heavy pruning when they are young trees can delay fruiting.
5. When you first start pruning a bearing tree, start by removing the most obvious problems -
 - remove branches which cross or rub
 - remove dead and weak wood
 - remove wood that grows back toward center of tree
 - remove branches that are in duplicate - they are not needed and shade out lower branches.

EXCESSIVE PRUNING

1. Excessive pruning may have occurred last year if poor fruit set occurred (apple, pear) and excessive vigorous shoots must be pruned from throughout the tree. Apple fruits have internal tissue breakdown and do not store well.

SUMMER PRUNING

It is usually done soon after fruit and nut trees leaf out. You can effectively remove many of the vigorous shoots that develop next to pruning cuts. Energy will be directed to growth on a more desirable part of the tree.

TREE STAKING

Walnuts and pecans are the only bare root trees that may require staking. Even walnuts can be grown without stakes if special care is taken.

If your bare root fruit fails to support itself, it has a serious root problem. You can prune it back until it is self supporting, but long term results will be better if you replace the tree.

PROTECT YOUNG TREES

Borers usually attack young trees near the soil line. Whitewash or interior latex paint diluted one to one with water will reduce sunburn injury. Sunburn often occurs during winter and spring, before hot summer temperatures occur.