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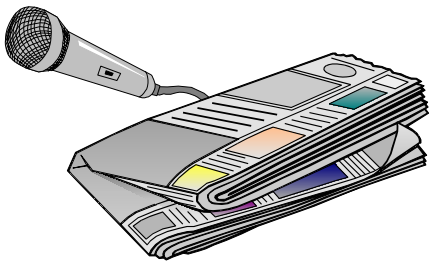
GLENN COUNTY COOPERATIVE EXTENSION NEWS FLASH



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PRUNING BASICS FOR DECIDUOUS FRUIT & NUT TREES

In order to achieve the desired results when pruning fruit and nut trees, you must have a clear understanding of your objectives and an understanding of tree response to pruning, states Bill Krueger, Glenn County University of California Cooperative Extension Farm Advisor. In the following article he covers some basic do's and don'ts of pruning and presents a simple pruning system for both young and mature trees.

Pruning of deciduous trees is normally done during the dormant season, after leaf drop but before growth resumes in the spring. Try to avoid pruning during prolonged rainy periods which could allow certain diseases to enter the tree through pruning wounds.

Thinning cuts are where a branch is removed completely by cutting as close to the parent limb as possible. Thinning cuts are used to open up trees, remove unwanted crowding branches and control tree size. When making thinning cuts, cut as close to the parent limb as possible without cutting into the bark ridge, or "collar" at the junction of the two branches. This will allow the smallest wound possible and faster healing. It is not necessary to paint pruning wounds with sealing compounds. These materials may actually delay wound healing.

Heading cuts are where branches are tipped or stubbed by removing a portion of the branch. Heading cuts are more invigorating than thinning cuts, especially in the upper portion of the tree on upright sun-exposed branches

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and are used to stimulate growth and promote branching. They typically result in the growth of two or three vigorous upright branches near the cut. Branches developing further away from the cut will be less vigorous with wider branch angles. The more severe the heading, the more pronounced the response.

In training young trees, your objective should be to promote early fruiting while developing a strong framework which is capable of supporting large crops. Pruning delays fruiting, so do only what is necessary to achieve a satisfactory framework.

The most common training system for most fruit and nut trees is the open center or "vase system". During the first dormant season, select three to four primary scaffold branches spaced equally around the tree, and, if possible, with some separation on the trunk. Primary branches should have wide angles of attachment, but should not be too flat (no more than 45° from vertical). You should be able to see a "bark ridge" (a small area of pushed up bark) on the upper side of the branch where it joins to the trunk. This indicates a strong attachment. Avoid branches with "included" bark (narrow angles of attachment where no bark ridge can be seen). Never select a primary which has two primaries below it at the same place on opposite sides because the upper primary will probably be out competed or "choked" out. Height of the first primaries is determined by personal preferences or considerations for convenience. Generally, it is desirable to have the fruiting canopy as low to the ground as possible, so starting the primaries low is advantageous - two to three feet would be a common height. However, if you want to get equipment, such as a mower close to the tree, you may want the first limbs higher. All upright vigorous branches which will compete with the selected primaries should be removed. Small caliper flat branches can be left for early fruiting. With most fruit trees, primary branches should be headed either by removing about 1/3 of the new growth, or if adequate growth has been made, just above where the secondary branches are desired. Almonds branch freely and do not need to be headed.

During the second dormant season, select 2 to 3 upright, vigorous, well-placed secondaries per primary. No secondaries should be allowed to develop on the primaries within 2 feet of the trunk. For large size trees, this distance should be greater. Remove unwanted upright competitive branches and keep the center of the tree open. Leave small, flat branches for early fruiting. Head primaries and secondaries by removing approximately 1/3 of the new growth.

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During the third and subsequent dormant seasons, continue the program described above, selecting secondary and tertiary branches. Remove crossing limbs and keep the center of the tree open by removing unwanted water sprouts (suckers). Continue this program until the structure of the tree is established.

Mature trees should be pruned annually to thin fruitwood, to control alternate bearing and increase fruit size, maintain good light distribution within the tree, control tree size and invigorate and renew fruitwood.

Prune to manage light distribution within the tree. If a lower limb is shaded by a limb higher in the tree, it will become nonproductive and eventually die out. Make sure desirable lower limbs receive adequate light by thinning or removing shading limbs above. Keep the center of the tree open, and remove crossing limbs. To avoid sunburn, avoid removing upright limbs which will leave more horizontal limbs with southwest sun exposure. If shoot tips have not made six to nine inches of new growth, head these branches – cutting back into two or three year old wood. Vigorous branches with adequate growth can be left unheaded. Remove dead and diseased limbs by cutting six inches below any sign of disease. It is generally not necessary to disinfect pruning tools between cuts. A notable exception occurs in apples and pears infected with Fire blight disease. Pruning equipment should be disinfected with a 10% household bleach and water solution if the equipment comes in contact with diseased areas.

The fruiting habit of a tree can give us some idea of how much to prune. Many species bear fruit on short fruiting twigs called "spurs". In this category are apples, pears, almonds, apricots, prunes, plums and cherries. These spurs live from three to seven years. Prune to renew this wood so that in three to seven years all the fruitwood on the tree is renewed. An example of this type of pruning would be to remove about 20% of the fruiting wood each year. Theoretically then, all the fruitwood would be renewed every five years. Remove old, rough wood and leave younger ,"smooth" fruiting wood. Well-placed water sprouts (vigorous one year shoots) should be left to develop into new fruiting wood. Let the vigor of the tree be your guide. If a healthy tree is not making much new growth, prune more severely to stimulate it. If it is overly vigorous, prune less.

When pruning is being used to control alternate bearing, pruning should be heavier prior to the expected "on" year and lighter, if at all, prior to the expected "off" year.

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A notable exception to the bearing habit described above are peaches and nectarines, which bear on one year-old shoots. To promote vigor and good fruit size, about 50% of the new growth should be removed each year. This heavier pruning will promote development of new shoots close to the trunk and will help avoid the problem of the fruiting area getting further and further away from the trunk of the tree.

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