# Thinning Deciduous Fruit Crops

Deciduous fruit trees often set more fruit than they can support to full ripeness. Excessive fruit crops compete for available carbohydrates (stored energy) and this can result in smaller fruit. Excess fruit can also weaken the tree and make it more susceptible to pests, diseases, limb breakage, and will lead to alternate bearing (a cycle where the tree bears excessively one year and little or none the following year).

Thinning fruit is the intentional removal of developing fruits and aids in the prevention of the above listed problems. Thinning immature fruit at the proper time allows each remaining fruit to grow larger without reducing tree vigor. In addition, remaining fruit will receive more sunlight improving fruit color and flavor at harvest time. Proper pruning also keeps trees smaller, require less labor and makes thinning easier.

Some fruit species will drop developing fruits naturally in what is known as the “June drop”. Species that do not typically require manual fruit thinning are cherries, figs, persimmons, pomegranates, citrus, and many nut trees. Peaches, nectarines, plums, apricots, apples, and pears can be manually thinned before the June drop to ensure a high-quality crop and avoid problems listed above.

Timing of thinning varies with growing season and time of fruit ripening. In general, stone fruits (peaches, nectarines, plums, and apricots) should be thinned when they are ¾ to 1 inch in diameter and pome fruits (apples and pears) should be thinned when they are ½ to 1 inch in diameter. Thinning too early can result in split pits in stone fruits and thinning too late reduces the likelihood remaining fruit will increase in size.

The amount of fruit to thin is dependent on species and the overall amount of fruit on the tree. Apricots and plums are relatively small and should be thinned to 2 to 4 inches on each branch. Peaches and nectarines should be thinned to 3 to 5 inches. If the pollination was ideal, fruit set will be excessive and additional thinning will be required. Conversely, if the fruit set was light, but the fruit set was heavy on a few branches, then less thinning is required because the branches without fruit are contributing carbohydrates to the overall crop.

Fruit trees bearing a crop should be thinned to increase fruit quality/yield and to reduce limb breakage. Before and after photos of unthinned and thinned peaches (University of Maine Cooperative Extension).

Apple fruit clusters usually have five blossoms with the king blossom in the center – this is usually the most desirable to retain as it will result in a larger fruit. When possible, try to select the fruit developing from the king blossom (North Carolina State University Extension).

Commercial fruit growing operations often thin fruit using chemical sprays which are not generally recommended for home orchards. For home orchards, there are two methods of fruit thinning: by hand or by pole. Hand thinning is more thorough and accurate than pole thinning but is slower and more labor intensive. Hand thinning allows the orchardist to space individual fruits so they don't touch at maturity. If a long branch has a heavy crop, thin more heavily, especially near the terminal end. Remove doubles (two fruits fused together) and small or damaged fruit.

Pole thinning is used on large trees and uses a long a pole to touch fruit clusters and remove a portion of the fruit. A rubber hose or other soft material is attached to the pole end to reduce scarring of branches and harm to desired fruit. With experience you can learn to strike a fruit cluster once or twice – just enough to properly thin the cluster.

While thinning your orchard, you can also monitor for pests, disease, and abiotic (environmental) stress such as sun-scald. Remember to fertilize your fruit trees during the growing season. Nitrogen is the only nutrient necessary to apply unless other deficiency symptoms are present. The first application should occur just after the leaves have emerged. The second application should be in mid-July and the third and final application in mid-September. Applying ½ of the yearly total in spring and ¼ of the yearly total during subsequent fertilizations is recommended.

On older, taller fruit trees, fruit thinning may not be practical. In these situations, thin areas of the tree you can easily reach and let nature take its course on the out-of-reach portions. If you have this situation, you might consider reducing the size of the tree during subsequent pruning. Remember to never remove more than 1/3 of the total canopy in any year.

*January 14, 2023*

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