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Pawpaw Fruit Drop/Thinning

What causes pawpaw fruits to drop or fall off of the tree after flowering? Many fruit trees often set more flowers than they need for a full crop, to offset sudden losses from weather or some other cultural factors. Although they are flowers, not fruit, this is called the “first drop.” A second drop may occur which involves fruit and usually happens in May or June. This is called “May” or “June” drop depending on the month in which the fruit drops. Fruit thinning is normal for many fruit trees, including pawpaw. Too large a crop may strain the tree’s resources and result in smaller fruits and poorer quality. So fruit drop is often nature’s way of reducing the fruit load and can be quite noticeable.

There are many reasons why pawpaws drop fruit. Some of the fruit that drops could be up to one-half the size of the mature fruit or smaller. The fruit drop could be a result of competition between fruit for resources (water and/or nutrients) or just shedding excess fruit. Specific cultivars can be a factor in fruit drop as some pawpaw cultivars drop fruit more so than others. The weather can also be a factor in fruit drop when the soil is too wet or too dry. In some fruits, those that contain the fewest or weakest seeds are among those that are the first to drop. An insect or disease may also contribute to fruit drop, such as the pawpaw peduncle borer (*Talponia plummeriana*). The level of available nutrients can also play a role in fruit drop. It has been suggested to me that the pawpaw trees must have sufficient canopy to retain fruit set. The canopy level may be a factor of age/maturity of the tree. There are, however, some varieties that flower and fruit quite young regardless of the canopy cover. The necessary level of canopy cover has not yet been determined. Shade is also a factor in fruit set in pawpaws. It is well known that for good quality fruit, pawpaws need at least one half day of sunlight and preferably, sunlight all day.

Although it may be difficult to thin the fruit set on pawpaws, it may be beneficial and necessary. If you can not bring yourself to thin the clusters, you may see branches break due to a heavy fruit set or need to prop up or tie up heavily loaded branches. If thinning is not done, the remaining fruit will be smaller and of poorer quality since the food reserves will be limited. In most cases, it is best to thin fruit early for the benefit of the rest of the crop. Additional research is needed to determine how much thinning is necessary for quality pawpaws. Research has shown that only one bloom in 20 (5 percent) of the apple blooms are left on the tree for a good apple crop and one bloom in 12.5 (8 percent) are left on the peach tree for a good peach crop. Thus, 95 percent of the apple blooms and 92 percent of the peach blooms are removed.

Fruit thinning or drop is normal and may drop fruit several times during the growing season but you may still need to thin more fruit after the June drop. Fruit thinning increases fruit size, improves fruit quality, and prevents limb breakage. Fruit thinning on pawpaws is a natural occurrence and little can be done to prevent thinning/drop. Just make sure that your pawpaw trees get plenty of water and they are not sitting in water.