Pollination needs of fruits in Oklahoma

There’s nothing sweeter than fresh fruit picked off the vine, tree or shrub. There are many species that can be grown successfully in Oklahoma with just a moderate amount of care, including apples, blackberries, cherries, figs, grapes, muscadines, peaches, pears, persimmons, plums and strawberries.

One aspect of fruit production that must be understood is pollination. It’s important to pay close attention to pollination requirements of different fruits. Some require the flower to be pollinated with pollen from a different cultivar of the same fruit. An easy mistake is to plant only one cultivar of the same fruit, which will lead to masses of blooms, few if any fruits and a lot of disappointment. Different strains of the same cultivar, such as two spur strains of “Delicious” apples, won’t provide proper cross-pollination.

Fruit set must be secured before a crop can be produced. Many factors influence pollination, including general health and nutrition, insects and diseases, late frost or winter injury and too much rain at blossoming time. The chief cause in most instances, however, is that of poor pollination. The flavor or color of fruit isn’t affected by cross-pollination.

Fruits don’t cross-pollinate outside of their own species. For example, stone fruits such as peaches, plums and apricots don’t pollinate one another.

For most fruit varieties, insects are the method in which pollination takes place. Two or more varieties of each kind of fruit should be used in all fruit plantings unless it’s positively known that the variety is self-fruitful.

Here is more information on fruits easily grown in Oklahoma:

*Apple* - Most apple varieties require cross-pollination. Those not requiring it usually produce more and better fruit when crossing occurs.

*Brambles* - Most of the bramble fruits produced in Oklahoma are considered self-fruitful. The recommended varieties are self-fruitful. The Dallas variety of blackberries requires cross-pollination.

*Cherries* - Sour cherries are self-fruitful. It is better to have two varieties (Early Richmond and Montmorency). Sweet cherries are self-unfruitful. Sour cherries generally do better in Oklahoma than sweet cherries.
Figs - Figs generally need cross-pollination.

Grapes - Grapes mostly are wind-pollinized. Many of the varieties are self-fruitful and cross-compatible. Most varieties of muscadines are self-sterile. About one-fourth of the planting should be made up of male vines. Where only a few vines are planted, the male vines may be located nearby on the fence row or edge of the field.

Peaches - Most varieties of peaches are considered self-fruitful. The exception is J.H. Hale. It produces abortive pollen but can be pollinated by almost any variety.

Pears - Most varieties of pears are partly self-fruitful. Usually, two or more varieties will result in a better pear crop. Bartlett and Seckel are cross-incompatible. Bartlett and Kieffer are considered cross-incompatible. Garber is a good pollinizer for Kieffer.

Persimmon - Japanese or Kaki persimmon (also referred to as Oriental) is dioecious. Some plants produce male (staminate) flowers and some produce female (pistillate) flowers. Some produce both and are self-fruitful. Some persimmons bear male flowers only when the tree is young, later change to the production of female flowers only, and in some cases, produce both male and female flowers. The persimmon tree is usually a male or female. American and Japanese trees are not inter-fruitful.

Plum - Most of the Japanese plum varieties are self-unfruitful, though some varieties are considered self-fruitful and cross-compatible. It’s a good plan, however, to plant two or more varieties.

Strawberries - The recommended varieties of strawberries are self-fruitful. Pollination problems, however, do occur in some of the everbearing varieties, but in most cases, it’s the result of high temperatures.

More information about fruit pollination is available on Oklahoma State University Extension’s website. Search for fact sheet HLA-6222.

###