

Fruit Trees and Frost

When planting fruit trees this spring, frost should be high on the list of considerations for variety selection and tree placement. Spring frosts can be detrimental to fruit trees with developing and open blooms. The cold can damage or kill these flowers resulting in little to no fruit onset. Anytime the temperature falls below 24 degrees F, 28 for fully open flowers, there is the potential for flower death. Apricot and peach trees in particular, are vulnerable in Kansas springs. If the flowers are damaged by frost, the tree will survive, but it may be an entire year before you have another opportunity for fruit.

Although other fruit trees can be damaged by frost, apricot and peach are first to bloom, and therefore more vulnerable. Apricots being the most sensitive as they are the earliest.

Apricot trees offer some "late" blooming varieties in an attempt to save these fragile flowers. Unfortunately, according to research at Virginia Tech, there is a maximum of a 4-day difference between blooms on regular varieties and blooms on "late" varieties. Although this difference is slight, those few days may be the difference between a poor harvest or a bountiful one. Varieties found to be later are 'Hungarian Rose', 'Tilton' and 'Harlayne'. 'Harglow' is also considered a late bloomer, but was not included in Virginia Tech's research.

Peaches, the next most vulnerable, are more likely to be damaged by a *late* frost. There are peach varieties that are bred for later blooming but there is also the capability for peach varieties to have fruit bud hardiness. Generally, hardiness refers to a plant's ability to survive extreme low temperatures over the winter. In the case of peach fruit bud hardiness, the buds are able to survive late frosts but have no greater ability to endure harsh winters. 'China Pearl', 'Encore', 'Intrepid', and 'Risingstar' are all late blooming peach varieties. 'Intrepid' is also shown to have excellent fruit bud hardiness.

Location can be another key factor in preventing frost damage. If you can, planting fruit trees on a hill will allow some of the cold air to drain down to lower elevations. Those living in the country may have a disadvantage as having trees in town will mean they are more likely to have a warmer micro-climate than in an exposed field.

Another method to save the delicate flowers is covering the trees with a cloth or tarp. This will only give trees a few degrees difference from outside air and is only practical for smaller trees.

An overhead sprinkler can be an unlikely frost hero if the cold temperatures are temporary. The sprinkler covers the flowers in water, which will turn into ice. As long as water remains on the top of the ice it will generate heat. The sprinkler must remain on until all the ice has melted. The downside to this method is that if the cold persists ice may develop on branches which can be damaging if the weight becomes excessive.

Some gardeners go to more extreme lengths and supply additional heat with heat lamps and charcoal briquettes. Although protecting your fruit harvest may be a high priority, safety should be a higher concern when considering these measures.

Although there is no full-proof method for protecting fruit trees from frost, variety selection and location, in combination with a protective method may be the slight difference your tree needs to survive the cold snap.