
Establishing a Home Orchard

Yavapai County has an excellent climate for growing deciduous fruit crops. These include peaches, nectarines, plums, apricots, apples, and pears. In many cases, the trees may be productive for 40 plus years (20 to 25 years for peaches and nectarines). In northern Arizona, deciding on a site for a backyard orchard often comes down to locating an area on your property with enough soil to dig a planting hole. Often, where soil is level and free of rocks, the site is in a valley bottom or streamside terrace making it colder and more prone to late spring frosts. Evaluating your property before planting and selecting the best orchard site will increase the potential for fruit production.

Fruit trees need eight hours per day or more of full sunlight. South and west facing slopes have higher intensities of solar radiation, especially during winter when the sun passes over at its lowest angle on the southern horizon. East and north facing slopes are more desirable for varieties/species that can flower early (peaches, nectarines, apricots and plums) and losses due to late spring freezes are a concern. Buildings and other structures can offer similar effects to a slope (i.e. the north side of the house or barn is similar to a north slope).

In addition, slopes affect cold air drainage. Cold air drains downslope and collects in bottoms and areas where it can be trapped. Houses, sheds, solid fences, and other barriers will trap cold air or slow its movement potentially leading to freeze damage. It may be a surprise that the Town of Jerome is the “banana belt” of the Verde Valley. This is due to its location well above the valley bottom and slopes and canyons that will allow cold air to move downslope. Climate change has also provided our area with lower likelihoods of bloom-killing, spring frosts.

The ideal orchard soil is a loam or silt loam with excellent drainage and water holding capacity. Clay soils have poor drainage and are more prone to root disease. Sandy soils need more frequent irrigation and nutrients are easily leached away. If a caliche layer (calcified hardpan) is present, then it must be penetrated to allow adequate drainage. To test drainage on your site, dig a one-foot-deep test hole and fill it with water. After it drains, fill it again and if it drains within 4 hours, you have desirable drainage. If it takes over 4 hours to drain, use a digging bar or jackhammer to fracture the caliche layer to improve drainage and retest as described above.

Space must also be considered when planning an orchard. For home orchards, semi-dwarf rootstocks are recommended. The following are recommendations for semi-dwarf tree spacing: apples - 18 ft; pears, peaches, and nectarines - 12 ft; and apricot and plum - 16 ft. Aggressive pruning can increase planting density, but if you have the space, it's best to let the trees use it. You may also try planning at higher densities or growing several varieties grafted onto one tree to overcome a lack of growing space, but these techniques also have limitations (competition for space and differential growth rates between varieties).

An adequate amount of irrigation water is also crucial to home orchard success. By planning ahead, you can create the ideal situation. You should plan for the mature size of the tree when designing irrigation basins or drip systems. Established fruit trees draw water and nutrients from two to three feet deep. One or two drip emitters placed at the trunk will not suffice for a mature fruit tree. Ideally, fruit trees need irrigation at least two feet beyond the drip line of the crown. Drip or micro-sprinklers are an excellent way to water fruit trees if they are well placed and properly scheduled. Flood irrigation is also a desirable irrigation method where there is level ground.

Purchase your trees from a reputable grower. Planting bare root trees in early spring is recommended. Ordering in advance as availability may be an issue. Fencing may also be necessary to mitigate wildlife damage (deer, elk, beaver, rabbits, etc.). Siting your backyard orchard in the best possible location, irrigating properly, and purposeful periodic pruning will ensure the best possible start for your orchard.



Home peach orchard in Chino Valley, AZ during the 2018 growing season. These trees were pruned short at planting time and produced a heavy crop two seasons after planting (Jeff Schallau, University of Arizona).

Additional Resource:

University of Arizona

[Training and Pruning Newly Planted Deciduous Fruit Trees](#) (AZ1668)

[Backyard Fruit Production at Elevations 3500 to 6000 Feet](#) (AZ1162)

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