



## Growing Avocados in the Sacramento Valley Part II - Variety and Rootstock Considerations

### A Three Part Series



There are many factors that go into successfully growing avocados in colder climates. We have discussed the importance of cold tolerant varieties; other factors to consider are rootstock influence, flower type, growth habit, and fruit characteristics.

A cold hardy rootstock can impart cold hardiness to the upper part of the tree (scion). And in the case of extreme cold conditions the rootstock may survive and a new tree can be grown from it. This is why it is not a good idea to grow a seed from any avocado you may buy in the store. For example Hass (the most common commercial variety) is less cold hardy than something with more pure Mexican heritage such as Mexicola, Duke, Bacon or Zutano. Also a tree propagated from a seed has

undergone sexual reproduction and will not be exactly the same as the parent and will have to go through a juvenile phase before coming into production. A common rootstock used by nurseries is Topa Topa, a Mexican strain which should have pretty good cold resistance. If you could find seeds from a Mexican strain such as Duke or Mexicola, you could grow the seed and then graft or bud on a variety of your choice.

Avocado has a unique flowering habit. There are two flowering types - A and B - that release pollen and are receptive to pollen at different times. The avocado flower has both male and female organs, which is not unusual. What is unusual is that the male and female organs within one flower do not function at the same time. An individual flower will be open for two days: an A type tree has a flower that is receptive to pollen in the morning of day 1, but does not release pollen. On day 2, this same flower releases pollen in the afternoon but is not receptive to pollen. In a B type tree, the opposite is true: in the afternoon of the first day, it is receptive to pollen, but does not release pollen, while in the morning of the second day it releases pollen, but is not receptive to pollen.

This type of flowering is called synchronous dichogamy. We really don't have to understand the details, just know that the practical application of this is that we should have both an A type tree and a B type tree in the garden for efficient pollination and maximum fruit production. It should be noted that this classification of flower types is not absolute; there can be variations due to environmental influences, and single trees may produce fruit.

Another important characteristic is size and shape of the tree. Most avocado trees can reach 30 feet or more. However, while some varieties are tall and columnar, others are shorter and spreading. One variety - called Wurtz - is considered dwarfing and can be grown in a container as a patio plant.

When discussing fruit characteristics of a variety, all must take a back seat to cold hardiness. However, all varieties that we will discuss have fruit quality considered good or better.

As a home gardener, do not worry about commercial aspects of fruit that are important to the commercial grower. Such things as shelf life, trucking characteristics (e.g. thin skinned and bruises easily), etc., are unimportant to the home gardener. This allows us to look at some varieties that are not commercially available in stores. For example, the Mexicola variety is considered to be one of the best tasting - and most cold tolerant - varieties but is not sold commercially because of the small fruit size.

In Part III of this series, we will discuss individual avocado varieties.

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