

Avocado Varieties for Commercial Trial in the Rio Grande Valley

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In the first yearbook of the Texas Avocado Society, published back in 1948, we quoted Wilson Popenoe as follows: "I believe that it can be safely said that the most important problem which the avocado growers in California are facing at the present time is the question of varieties." That was said in 1915 and published in the first yearbook of the California Avocado Society. California growers are, after forty years, still facing that important problem. It is needless to say that variety is also, the most important unsolved problem in avocados for Texas.

The variety problem in the Rio Grande Valley is a complicated one; much more so than under Florida or California conditions. We are confronted with a soil salinity problem, an anthracnose problem and a cold hardiness problem. The cold hardy Mexican and Mexican hybrid varieties that are grown commercially in California, lack salt and anthracnose tolerance. Consequently, they are not too well adapted to our saline soils and our moist summer weather. The salt and anthracnose tolerant varieties grown in Florida, although quite adapted to our soils and summer climate, are tender to cold.

The poor adaptability to Valley conditions of most of the named avocado varieties grown in California or Florida has focused the attention of the Avocado Variety Committee on new and better varieties for Texas originating from seedlings found in the Valley and Mexico (Cooper and Maxwell, 1956). Once an outstanding seedling was found, the superior qualities of the specimen was perpetuated by grafting onto West Indian rootstock. These selections were planted in test plots in the Valley, along with trees of many named commercial varieties from California and Florida. The Variety Committee has evaluated both the old and new varieties from the standpoint of salt and cold tolerance of the tree, production of fruit and anthracnose tolerance of the fruit. Those varieties which appear the most promising for limited commercial trial in Texas are the *Castro*, *Pancho* and *Lula*. Varieties that are suitable for door-yard use include *Dias*, *Santa Engracia*, *Paz* and *Amidon*.

The *Castro* was selected from the Castro planting of avocado seedlings at Victoria, Tamps., Mexico. The tree is upright growing, vigorous, consistent bearer of fruit, cold hardy and has moderate salt tolerance when grown on West Indian rootstock. The foliage has a strong anise odor which indicates the Mexican race of avocado. The tree blooms in late January and matures its fruit in June and early July. The fruit is pear shaped, purple colored, thin skinned and weighs 5 to 8 ounces. It has a medium sized seed and a rich nutty flavored flesh with no fiber. It has the disadvantage of developing anthracnose on the fruit during wet years but it is the best early summer variety presently available.

The *Pancho* originated as a seedling at Stuart Place, Texas. The tree, when grown on West Indian rootstock, is a heavy and consistent bearer of fruit and has good cold hardiness and moderate salt tolerance. The foliage is dense, leathery and has a strong anise odor which indicates the Mexican race of avocado. The blooming period begins in January and the fruit matures in July and early August. The fruit is oval to slightly pear shaped, 3-6 ounces in weight, light green colored and thin skinned. The seed is medium sized, and the flesh is greenish-white, with a rich nutty flavor. The fruit develops a small amount of anthracnose during wet years or years when the skin of the fruit has been injured by blowing sand. The Pancho is the best mid-summer variety presently available.

The *Lula* is a named variety from Florida. It is considered to be a Guatemalan-West Indian hybrid (Cintron, 1952). The variety was introduced into Texas about 1935. A planting of Lulas, located at the Kennedy place in La Feria, produced excellent crops of fine quality fruit consistently until the freeze of 1949 when the trees were severely injured. The trees are thrifty, vigorous growing and have good salt tolerance. The Lula variety blooms in March and the fruit ripens in September but will hang on the trees through January. The fruit weighs from 8 to 24 ounces and continues to increase in size if left on the tree during the fall and winter. It is a green fruit with a medium thick, slightly pebbled, rough skin and is tolerant to anthracnose under all weather conditions. The seed is medium large and the flesh has a creamy green color and good flavor. The fruit is well accepted by the trade and holds up well under shipment. The Lula tree, however, is more tender to cold than the Castro or Pancho varieties. Temperatures of 27° F for several hours will cause some injury. This variety is well adapted to our soil and summer climate and produces such excellent crops of fruit that it is worthy of commercial trial if the grower will provide wind breaks and use orchard heaters on cold nights.

The *Diaz* was found as a seedling at the Rogelio Diaz place in Victoria, Tamps., Mexico. It is probably a Mexican-West Indian hybrid. It is cold hardy and consistently produces a good crop of 6 to 10 ounce fruit which ripens in August. The fruit is purple, oval shaped and has a thin skin. The flesh is free of fiber and has a rich nutty flavor. The seed coat has a tendency to stick to the flesh which is undesirable in a commercial fruit. Also, on ripening, a fair percentage of the fruit develop splits in the skin that usually head over leaving scars on the fruit. The variety is of value mainly because of its extra heavy fruit production, excellent flavor and anthracnose resistance. It should be suitable for dooryard plantings in all parts of the Valley.

Other varieties that are suitable for dooryard plantings include the *Arnidon*, *Paz* and *Santa Eugracia*. There are many other promising selections from Mexico now growing in the test plots but they have not been under test long enough to make a proper evaluation of the variety. The search for even better varieties will continue for many years.

Literature Cited

Cintron, R. H. 1952. Raising a question as to the probable parentage of the Lula avocado. Yearbook Tex. Avo. Soc. for 1952:37-38.

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