

Botany - Horticultural Races

The avocado belongs to the genus *Persea*, a member of the laurel family, Lauraceae, to which belong such economic plants a camphor, sassafras, and cinnamon. The common native California bay tree is likewise a member of this family.

Botanical classification of *Persea americana* (Mills), has had a diverse history, with the Mexican type sometimes split off as a separate species, *Persea drymifolia* (Popenoe). But it has become increasingly clear that only one good species is involved (Bergh and Storey) with *P. americana* subdivided into three botanical races. These three major races have definite characteristics and adaptations.

Mexican Race

Leaves anise-scented; under-surfaces more glaucous (whitened with a bloom). Flowers generally more pubescent (hairy); bloom earliest in the season. Fruit small. Fruit skin thin to membranous, rarely over 0.75 mm. Seed relatively large to very large, and often loose. Fruit pulp commonly rich to strong in flavor, sometimes with anise aroma; often fibrous. About six months from flowering the fruit reaches maturity. The most cold hardy of the avocado races; also more resistant to heat and low humidity. The least tolerant to soil salinity. Rarely does well in coastal environment.

West Indian Race

No anise leaf scent. Fruit small to large. Fruit skin leathery, seldom over 1.5 mm. Seed relatively large; sometimes loose in its cavity. Pulp milk to watery in flavor; lower oil content than other two races. About six months from flowering to fruit maturity. The least hardy of the three races to cold and to low humidity, not adapted to anywhere in California. The most tolerant to soil salinity, as either rootstock or top. At point of fruit attachment, the pedicels have a unique nailhead configuration.

Guatamalan Race

No anise leaf scent. Young foliage more commonly reddish. Fruits small to large. In adaptation and tolerance to soil and climate, intermediate between the above two races. The fruit skin is usually thick and leathery to woody, sometimes over 6 mm. Seed almost never loose in its cavity. Fruit may require a year from bloom to maturity.

In regions where all three races are found at the same latitude, the West Indian race will thrive from sea level to an altitude of about 1000 meters; the Guatemalan from about 100 to 2000 m; the Mexican from about 1500 to 3000 m. All of these altitudes are approximate, and will vary with latitude and with other factors influencing climate. The three races have therefore been respectively described as tropical, subtropical and semi-tropical.

Avocado Flower Types	
Variety	Type
Alboyce	A
Anaheim	A
Arturo	A
Bacon	A
Benik	A
Carlsbad	A
Clifton	A
Colinson	A

Decem	A
Dickinson	A
Edranol	B
Elsie	B
Emerald	A
Ettinger	B
Fuerte	B
Ganter	B
Gehee	A
Hass	A
Irving	B
Jalna	A
Janboyce	A
Jim	B
Linda	B
Lula	A
Lyon	B
MacArthur	A
Marshelline	B
Mayapan	A
Mayo (Covacado)	A
Mexicola	A
Nabal	B
Northrup	B
Nowels	A
Pinkerton	A
Puebla	A
Queen	B
Regina	B
Rincon	A
Reed	A
Ryan	B
Santana	B
Sharpless	A
Spinks	A
Stewart	A
Suke	A
Topa Topa	A
Wright	B
Yama	A
Zutano	B

Sources:

1. P.A. Peterson. *Flowering types in the Avocado With Relation to Production*, California Society Yearbook. 40:174-179. 1956
2. B.W. Bergh. *The Remarkable Avocado Flower*, California Society yearbook. 57:40-41
3. W.B. Storey. Personal communication
4. B.W. Lee. *Flower type of Reed Avocado*. California Avocado Society Yearbook. 57:43-44
5. B.O. Bergh. Personal communication