

NOTES ON AVOCADOS IN THE SOCONUSCO AREA OF CHIAPAS, MEXICO

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The Soconusco area of Chiapas has on the north the Sierra Madre de Chiapas; on the south, the Pacific Ocean; on the east, Guatemala, and on the west it ends more or less at the village of Acapetahua, 76km northwest of Tapachula. The principal city is Tapachula, of 40,000 inhabitants, located near the Guatemalan border. It has good communications by air, rail, paved highway, telephone, telegraph and mail, and branches of four big banks. It is the commercial center for the growers of coffee, cotton, cattle, bananas and maize.

Geomorphologically this area is the low and narrow Pacific coastal plain interspaced with lagoons and, with its adjacent foothills, ranges to about 100-200 meters altitude. The plain is of Pleistocene and recent deposits. The foothills, beginning at about 100m, are of granite gneiss along with young eruptives (Schuchert, 1935, p 321).

The coastal plain soils are typical alluvial volcanic loams; some with high humus content in the top A-horizon of 20-30cm; then clay loams in the B-horizon, to sedimentary agglomerates in the D-horizon. In the poorer soils, N, P and Mn must be provided.

In areas near to sea level the water table may be high in the wet season and in some places it reaches above the soil surface. On the foothills the soils are usually brown clay-loams with good drainage, but lacking in fertility. Erosion is a problem.

The climate is tropical with a dry season; temperatures vary about 5°C from an annual mean of 25.7°C.

Rainfall varies from the coastal 1500mm (60 inches) to 3000mm (120 inches) at 800m. The wet season is April to October, being shorter along the coast and longer in the foothills (Vivo, 1946, Cuarta Parte p. 10).

Most avocados are planted on the coastal plain and its adjacent foothills. Plantings are small, varying from a few trees to 100. There are no big plantations such as there are in coffee and cotton.

Avocado Fruit Characteristics: There are no small, smooth-skinned Central-Mexican ecotype fruits. Fruits are medium to large in size, ranging from 200g-1000g; usually pear-shaped, but there are variations up to round; and in many mixtures between the Guatemalan and West Indian ecotypes. Flavor is mild, varying from flat and watery to rich and firm, but nowhere does it reach the anise flavor of small-fruited avocados. The skin is medium to thick and green to dark purple.

In a program to eliminate marginal coffee planting, Mexico is providing technical advice in the substitution of growing rubber and fruit (such as lemons, grapefruits, mangoes, and avocados) in place of coffee. The avocado varieties are: Booth 7, Booth 8, Hall,

Fuerte and Hass; all for sale at 80 cents U.S. apiece.

Harvesting varies; usually from May to September. The trees being tall seedlings, their fruit are difficult to pick and are frequently knocked off by poles. There is no wonder, therefore, that much of the crop is immature and damaged.

Owners sell to local buyers, who ship by truck, by railroad express, and by air to Mexico City. Prices to the grower vary from two to five dollars per 100 fruits.

Pests are of all kinds—from diseases such as *Phytophthora cinnamomi* (root rot) and *Colletotrichum gloeosporioides* (anthracnose) to *Stenoma catenifer* (seed borer)—and there are no control measures.

There is no doubt that avocados will continue as a crop. Here the avocado has nowhere to go but up. From among many trees planted above a high water table, surely some will be found which are *Phytophthora* resistant, and this area should be interesting to California growers as well as the local Chapanecans.

(I am indebted to Dr. G. Zentmyer for reviewing these notes. Tapachula, Chis. 4 September 1965.)

Literature Cited

1. Schuchert, Charles, Historical Geology of the Antillean-Caribbean Region, New York, John Wiley & Sons, Inc., (1935).
2. Vivo, Jorge A. and Gomez, Jose C. Climatologia de Mexico, Instituto Panamericano de Geografia e Historia, Publicacion No. 19, Mexico, (1946).