

tolerant of cold and was not injured during the past winter when the temperature was below 33 degrees for 8 hours at the Sub-Tropical Experiment Station. This variety also propagates more readily from cuttings. The fruit is large, with 2/3 of the weight of the fruit extracted as juice. The fruit is semi-sweet and with an agreeable apple-like flavor. The skin is thicker than some of the other selections and is less susceptible to puncture injury by stink bugs. The ascorbic acid content ranges from 1500 to 2000 milligrams per 100 grams of juice. It has out-produced the other selections in every year that yield records have been taken, the most recent having been from April through September of 1957, when Sweet clone plants 8 years in the field produced an average of 171 pounds of fruit each, which would amount to a theoretical total of 51,300 pounds of fruit per acre, if estimated on the basis of 300 plants per acre, or approximately 25 tons. This Sweet variety has been officially named the "Florida Sweet Barbados Cherry", on the basis of its superior performance, and is recommended for either home planting or commercial production.

MANGOS IN MEXICO

By
R. BRUCE LEDIN¹

700596

One of the highlights of the recent meetings of the Caribbean Section of the American Society for Horticultural Science, which were held in Mexico from April 22 through April 28 was the excursion to Vera Cruz state on the Gulf Coast, where the ten members of the Florida Mango Forum and others had an opportunity to see commercial plantings of mangos. The region around Cordoba, in particular, is famous for this fruit. We were told that there are about 17,500 acres of mangos in Mexico, and that 60 to 70 percent of this total is in the state of Vera Cruz, with most of the remainder in Yucatan, on the Isthmus of Tehuantepec or on the west coast. The Mexican crop is valued at about 4 million dollars and represents about 108,000 tons. These figures are said to be based on

¹Sub-Tropical Experiment Station, Homestead, Florida

a 4 to 5 year average. The mango rates about 6th or 7th in acreage and value, being less important than the tomato, orange, banana, avocado and pineapple, but ahead of the papaya, melon, lime and coconut.

VARIETIES—The principal variety found in the markets is the Manilla, a Philippine type very similar to Pico and Cecil. It is yellow in color when ripe, and is sweet, juicy, and more or less fiberless. This race was presumably introduced from the Philippine Islands during Spanish Colonial times, and probably entered the country by way of Acapulco. It is one of the rare examples, in our hemisphere, of a mango of reasonably high quality that has become well established and that can be reproduced entirely by seed, due to its polyembryonic habit. The fruits bought in the market during our visit were unfortunately early ones that had been picked too green (they do this in Mexico too) and were over-ripe when tested, so that the flavor was decidedly off. Many fibrous seedlings were also seen, which considerably resembled our No. 11. These are called "corriente", a name applied to many inferior kinds of fruit grown from seed. Seedling trees grow tall and spread little in contrast to those of the Manila type, which is a quite large and beautiful tree, with a dense, dome-shaped crown. Mango Piña was seen in the markets, a seedling type orange in color and tasting like a Mme. Francis of Haiti. We were told that a 30 year old Haden grove exists in Oaxaca, planted by an American.

Manila mangos are popular in Mexico, where they sell for the equivalent of about 8-10 cents per fruit. They are picked green for shipment to Texas and California and are enroute 5 to 7 days before reaching the consumer, one grower reporting a price of \$2.00 a bushel for his early crop. Fumigation with ethyl dibromide takes place at the Texas border.

Several young mango groves were seen, one interplanted with oranges. We also saw several old Manila groves in which the trees were beginning to crowd each other a bit. One orchard 15 miles west of Vera Cruz at about 22 feet elevation above sea level, was reported to be about 25 to 30 years of age. Trees were set in rows 45 to 50 feet apart and were 30 to 40 feet in height, with

some lateral crowding. This stand covered about 60 acres, and was watered by surface irrigation. The trees were said to be grafted, but general practice is to plant seeds, due to the Manila's polyembryonic habit. These mangos are not fertilized, nor is there any system of spraying for scale or for anthracnose. Many of the larger trees were found to be full of both scale and sooty mold. Very little fruit was seen on the trees, and we were told that while the trees flowered during the past winter, February rains brought anthracnose and resulted in a very light set. Local report has it that the Manila mango fruits well four out of five years, but this must have been the off year. Most of the trees seen looked like they had failed to flower and one is led to wonder if they may not have borne a heavy crop last summer and simply failed to produce adequate vegetative growth due to lack of fertilization. One cannot help but wonder if there is not a tendency to alternate bearing in these trees.

Fortunately, the mangos in Vera Cruz state are rarely attacked by the Mexican Fruit Fly, *Anastrepha bidens*. This fruit fly will not survive in a warm climate, which exists in most parts of the district at elevations under 3,000 feet. Mangos grown in the state of Morelos, however, at 4 to 5 thousand feet are attacked and fall to the ground riddled with larvae, so that no one bothers to harvest the crop. We were told that the mombin fruit fly, *Anastrepha monbinpraeoptins* manages to survive at low elevations and does occasionally attack the Manila mango, but is not much of a problem.

Vera Cruz winter temperatures rarely get below 60 degrees Fahrenheit, and the best mango land sells for about \$200 an acre. Anyone interested?

LITERATURE

CONSERVACION DE SUELOS, por Fernando Suárez de Castro
—SALVAT EDITORES— He leído con gran interés el excelente libro del Ingeniero Agrónomo Colombiano Suárez de Castro. Me parece que esa obra viene a tiempo, pues a pesar de que existen buenos trabajos similares en inglés y en francés, és-

tos no se adaptan siempre bien a las condiciones que encontramos en América Latina. El libro está adecuadamente dividido en dos partes, la primera trata de cómo se forman y cómo se destruyen los suelos y la segunda de cómo se pueden defender. Cada capítulo que compone esas partes es muy completo y con amplias indicaciones bibliográficas. Las prácticas mecánicas, culturales y agronómicas que, a mi parecer, son las más importantes para el agricultor, están claramente explicadas en un lenguaje sencillo pero siempre científico. Nada esencial ha sido omitido y creo que cualquier agricultor progresista o aun cualquier técnico quedará complacido con la lectura de la obra y en particular con sus múltiples posibilidades de aplicación práctica. Algunos casos especiales de control de la erosión, como el control de cárcavas o zanjones, son, en razón de su gran importancia, tratados aparte. El libro se termina con atinadas observaciones e indicaciones sobre programas nacionales de conservación de suelos, discutiéndose brevemente la intervención estatal, las condiciones sociales y económicas, las regulaciones necesarias, sin dejar de lado los métodos experimentales y educativos. También contiene al final un glosario muy útil para las personas poco familiarizadas con los términos de conservación de recursos naturales.

A causa de las características que he indicado que hacen su lectura fácil y amena aunque con bases científicamente comprobadas, me parece que la obra del Ingeniero Suárez de Castro pudiera servir ventajosamente de libro de texto en las Escuelas Agrícolas de América Latina y debería tener su puesto en las bibliotecas de las Facultades de Agronomía y de cualquier Sociedad interesada en la conservación de lo más valioso que tenemos y que es el suelo y el agua. — MANUEL CHAVEZ V.

