

## SUMMARY OF OUR TRIP TO MEXICO

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The following is a summary of our tour to Mexico, which was held November 4-18, 1967. The tour was specifically planned for California avocado growers to meet with the Mexican growers, observe their plantings and compare notes on production, packing, and merchandising.

The group flew from Tijuana to Guadalajara. Two and one-half days were spent in Guadalajara, at which time we were able to do some sightseeing and visit an avocado orchard about 40 miles north of the city. Traveling through changing countryside, en route to the orchard, the group was able to see the many changing lands of Mexico. Our arrival at the ranch, owned by Señor Manuel Sescosse, was in the typical Mexican manner, namely, a table loaded with food, a Mexican band, and the warm hospitality of the host and hostess. Mr. Sescosse and his family prepared a large table of all the native foods from this part of the country and placed it underneath the avocado trees. Under another tree, was a small Mexican band playing both American and Mexican music.

After the various greetings and partaking of the food, a tour of the orchard was made. Mr. Sescosse is growing the best Mexican seedlings that he has been able to find. He has had some difficulty in getting Hass and Fuerte to grow on the grafted Mexican stock. His orchard is about 10 years old and appears to be producing quite well for a seedling orchard. The soil is a heavy, clay type soil with adequate drainage, except in certain portions of the grove. Where drainage is bad, the trees have drowned out. He does not feel that the cinnamon fungus is a factor. The soil was still quite moist from the recent record rain that they have had in the country.

Time ran out on this visit and it was difficult to say goodbye to our host and hostess who had shown us such a wonderful afternoon. It was after 9 o'clock in the evening when the group arrived back in Guadalajara.

Early the next day the group started out for the new growing area of Uruapan. Driving along the southern shore of Lake Chapala, the growers could see the results of the very heavy rains and flooding that had taken place during the rainy season. One avocado grove we were to visit on the shore of Lake Chapala had been inundated with the rising waters. The lake was 4½ feet above the highest level in history. The Mexican growers were beginning to move into the fields to work the portions of ground that had not been flooded. This was the start of a wonderful and educational tour.

Upon reaching Uruapan we were met by a group of avocado growers. The day was spent visiting a large 60-acre avocado grove about 7 miles out of town. This is a young Hass and Fuerte orchard about three years old. It is situated in a rolling hilly section of

the country at an elevation of around 5,500 feet. The orchard is surrounded by pine trees and other native trees growing in that area. It was also very interesting to see the backyards of some of the local residences where avocados, pines, and bananas were growing side by side and flourishing.

Irrigation is accomplished either by flooding or by furrows. Water is pumped up from the river, and irrigation is done only during the dry period which is about three months of the year. Regular rainfall takes care of their irrigation problems. The soil is a little on the heavy side compared to what we are used to in San Diego County. It is a clay loam with fairly good drainage. The trees grow very well and exceedingly fast and large. Production is early, especially on the Hass variety.

More commercial growers are now forming associations so they can take advantage of the cooperative effort to obtain information, equipment, supplies, and to market their product. Hass and Fuerte are the main introduced varieties though they are searching out some of their local seedling varieties that show promise. Uruapan is one of the better areas for avocado growing and developing of an industry. The climate is good, the soil is good, the water supply is adequate, and as a result it could be one of the better producing areas of Mexico. Throughout our trip in Mexico there was one thing that was evident and that was, there is plenty of land available for avocado development.

Fertilization is done three or four times a year, using both organic matter and inorganic material such as ammonium nitrate, urea, and mixed fertilizers of nitrogen, phosphorus, and potassium. Pest problems are more serious in Mexico than in California. They do spray for various pests but the pests have not proven to be a real threat to the industry yet. Root rot is present, but because of so much land from which to choose, the new grower in Mexico is learning to select good soil and taking every precaution so root rot is not introduced into the new land through nursery stock. Most of the large developments grow their own nursery stock and are trying hard to prevent the occurrence of root rot.

In Uruapan the California growers spent an interesting time with the avocado growers of this area. After visiting the groves during the day, the Mexican growers joined our group for dinner and we were able to exchange ideas on avocado culture. Prior to dinner, a one-hour session was held at which time many aspects of avocado production and marketing were discussed. The Mexican growers provided an excellent evening of entertainment with local, native musicians, singers, and dancers depicting the folklore music of the region.

After leaving Uruapan, the tour took us through much of the agricultural area, as well as historical places in Mexico. Areas visited were: Morelia, Guanajuato, Queretero, Tula, Irapuato (the strawberry growing capital), Patzcuaro, and finally Mexico City. In Mexico City, a briefing was held at the U.S. Embassy. We heard a talk on the avocado industry of the country. The Agricultural Attaché told how the avocado industry in Mexico is expanding and becoming better organized. According to the figures published by the Mexican Secretary of Agriculture, there are approximately 25,000 acres with a production between 100,000,000 and 250,000,000 pounds per year. These figures may, or may not be accurate since so many homes or ranches in Mexico have one or more

avocado trees in their yard and the crop would be difficult to record off these thousands of trees. It is practically impossible to obtain the exact amount of avocados produced, marketed, and consumed in Mexico. Avocados are grown in almost every State of the country. The fruit is an important part of the Mexican people's diet, so large volumes of avocados are eaten.

While in Mexico City, we visited an orchard and a nursery in nearby Cuernavaca. Once again the group viewed excellent growing avocado trees, with good sets of fruit. The Fuerte and Hass were being planted, but some selected varieties from local Mexican areas are also doing well. In Tacambaro, southwest of Mexico City, large acreages of avocados are being planted. A group of Mexican doctors have planted 1300 acres, with another 200 to 300 acres still to be planted. Five acres of their planting are devoted to nothing but selection of good varieties. Thirty per cent of the acreage is planted to Fuerte, 30% to Hass, and the balance to about four or five good selections of Mexican varieties. At the present time, approximately 35 varieties are under test. These men have a complete operational program for selecting varieties, maintaining the acreage, and marketing their crops. Very little assistance is provided by the government. These people have set up their own organization for providing all technical information on production and marketing operations.

We next were on our way to Puebla. Puebla is east of Mexico City and we stayed here while visiting the home of the Fuerte avocado. Atlixco is a short distance away, and it was in the courtyard of a home, in this city, that the original Fuerte tree was located.

In 1911, an American, Mr. Carl Schmidt, was employed by the West Indian Nursery in Altadena, California. His task was to search the Mexican market place for avocados of outstanding quality and to locate the trees from which they came. He kept budwood from the best trees, numbered each, and snipped them by Wells Fargo to Altadena. Many buds refused to adapt to the soil and climate of California, The #15, which Schmidt had cut from a tree in the garden of Alejandro Le Blanc, flourished. When it survived the great freeze of 1913, its strength was officially recognized and it was given the name "Fuerte," the Spanish word meaning vigorous and strong. The Fuerte tree that Schmidt found in Atlixco created California's avocado industry and still remains its main variety.

The growers were very impressed with the beauty of the city of Puebla and its view of famous Mt. Popocatepetl. The orchards visited are relatively young commercial orchards, ranging from 4 to 8 years of age. Hass, Fuerte, and other local Mexican varieties are being grown. In one orchard, between Atlixco and Puebla, the owner has developed a black Fuerte, and it looks excellent. The seed is exceptionally small for the size of the fruit. The skin is rather smooth and it darkens upon ripening.

A visit was made to the Plaza in Atlixco to view the tree and monument placed there by a group of California avocado growers from the Avocado Society. This group made the pilgrimage in 1948 to dedicate a plaque and establish a monument in the city's Plaza in appreciation for what it had done in assisting California to establish an avocado industry.

A second stop was made by our group in Atlixco. It was at the home where the original Fuerte tree had grown and was discovered. The tree is no longer there, but a stone

monument and plaque designates the spot. This monument was erected by the California Avocado Society in 1938. In addition to the monument inside the courtyard, there is a plaque on the outside wall of the home for all passers-by to read concerning this historical site.

The tour combined with visits to three large haciendas, where avocados are grown. The grounds and buildings were beautiful and very typical Mexican. Our hosts, Mr. Raoul Costes, Mr. Enrique Gilly, and others, could not do enough for the group. We were shown through the haciendas, the stables, the nurseries, fields, and orchards. The warm hospitality of the Mexicans was evident everywhere. We were constantly provided with refreshments in the way of fruit, beverages, and food.

Growers in this area are likewise growing Fuerte and Hass varieties, and experimenting with other California varieties. Naturally, the local varieties are also being tested. The estimated yield on the trees in this area is approximately 4 to 5 tons per acre. The climate is drier than in Uruapan and quite similar to southern California. The only difference is that they get rain. Last year they had 43 inches within a 3-month period. There is a need for irrigation during the dry months. This is usually done by flood irrigation on a 15- to 25-day interval. A cover crop of sweet clover between the trees is grazed and harvested. Some of it is used as mulch to keep the soil in good condition. The soil is a little heavier than our types, but generally pretty good.

The growers are becoming better informed on what type of soil to plant in, and if they run into some bad soil they just move on to the next acreage.

The time spent in Atlixco and Puebla was entirely too short, since there was so much more to see. The final day's journey took us through Taxco, the Silver City, and the mountain country of that area. We arrived in Acapulco for a day and a half rest before returning home.

We cannot conclude this Mexican report without giving more general observations. There is a great rush of planting grafted avocado trees. Avocado culture is relatively inexpensive. Water is abundant, convenient, and of good quality. The trees are being grafted to known varieties from California, as well as some of the more promising Mexican types. The Mexican is becoming more conscious of the profitability of growing avocados and this is why so many are going into the commercial growing and marketing of avocados. There must be more information on marketing for them to adequately do an efficient job in getting a return back to the grower. There are some groups, however, showing considerable interest in the experimentation and pursuing the means to develop the industry. Growers are forming associations and cooperatives. They travel widely and are constantly searching for ideas in countries such as the United States and Israel. Since the world markets are becoming interested in avocados, Mexico would like to share in this expanding market. The people are intelligent, competent, and eager to develop their industry.