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Expeditions to Northern Mexico during 1955 in Search of Avocado Varieties

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This paper is one of a series of reports describing various expeditions into Mexico by members of the Texas Avocado Society, now the Avocado Section of the Rio Grande Valley Horticultural Society, in search of superior selections of avocados for Texas. The previous reports have been published in the Yearbook of the Texas Avocado Society for 194S to 1954. A current review of the avocado variety problem in the Rio Grande Valley and the reasons for exploring Mexico for new varieties are given in another paper in this Journal (Cooper and Maxwell, 1956).

State of Coahuila, Mexico

During late June, Guy Adriance, Joseph Woolcott and Norman Maxwell surveyed the fruit growing areas in the State of Coahuila. They were accompanied by Ing. Reuben Estrado and Ing. Antonio Mercado from the Antonio Narro School of Agriculture in Saltillo, Mexico.

Seedling Mexican avocado trees were found in Torreón, Parras, Quatro Ciénegas, Musquiz, Allende and Nava. The heaviest concentrations seemed to be in the northern part of the State at Musquiz, Allende and Nava. Residents of Quatro Ciénegas, located in the mountains west of Monclova, claimed that the fruit of numerous backyard avocado trees matured in September and October. No avocado fruits were mature in late June.

Quatro Ciénegas, Musquiz, Allende and Nava are located west and north of the Rio Grande Valley so the temperatures during the 1951freeze were as low or lower than in the Lower Rio Grande Valley. Many old trees had survived the 1951 freeze with small wood damage; the progeny of these trees might be cold-tolerant under Texas conditions. The humidity in this section of Mexico is very low, therefore, it would be difficult to select trees for anthracnose resistance. Probably, selections for cold tolerance and commercial fruit possibilities could be made in Mexico and anthracnose resistance could be determined in the Valley test plots.

Cerralvo, Nuevo Leon, Mexico

On July 15, 1955, Norman Maxwell and Edwin LaGrange visited the town of Cerralvo, which is located about thirty miles from Roma, Texas. Many seedling avocado trees of the Mexican race were growing in back yards and in the plaza. Effects of the 1951 freeze were still very apparent. Some trees had been killed to the ground while others had only small wood frozen.

Selections were made of two trees that appeared to be over thirty years of age and that had very little freeze damage. Both selections were reported to mature their fruit in June and early July. One tree had green fruit and the other black fruit; fruit of these selections showed no anthrac-nose although anthracnose was present on fruit of nearby trees.

Budwood was cut from these two trees in November and brought into the Valley. After fumigation by the Plant Quarantine Station at Brownsville, Texas, the budwood was grafted on West Indian rootstocks. These selections have been named "San Juaneno" and "Dr. Guerro" and the trees will be grown in the test plot at the Valley Experiment Station.

Sabinas-Hidalgo, Nuevo Leon, Mexico

The town of Sabinas-Hidalgo is about ninety miles south of Laredo, Texas, on the Pan American highway. Eliot Coit of Vista, California, has suggested that the Sabinas-Hidalgo district should be explored for promising avocado strains.

On August 1, 1955, William Cooper, Norman Maxwell and Edward Olson explored the Sabinas-Hidalgo region for avocado strains that might be adapted to the Valley.

After the group arrived in Sabinas-Hidalgo, they met Mr. Carlos Garza, a local avocado grower. Mr. Garza had previously surveyed the area for avocados and had grafted trees of many superior selections on his place. Mr. Garza said that there were about ten thousand avocado trees in the town and he spent a day showing the outstanding trees of the area to the group. Eleven selections were made of the most promising strains. The fruit of some are black skinned and others are green; the fruit matures from June through October. Many old trees survived the 1951 freeze with damage only to twigs and often were thirty feet or more in height.

The climate of this area is dry and there was no evidence of anthracnose; anthracnose susceptibility of the various selections will have to be determined in Valley test plots. The fruit size of the selections varied from three ounces to about ten ounces; most were in the five to seven ounce class.

Norman Maxwell and Everett Ballard returned to Sabinas-Hidalgo in late November to make budwood collections of the 11 selections. These selections are now successfully propagated on West Indian root-stock at the Experiment Station in Weslaco and will be planted in the test plot in 1956.

Rayones, Nuevo Leon, Mexico

The group left Sabinas-Hidalgo August 2 and drove to Montemore-los via Monterrey. They were met by representatives of the Patronato including Ing. Teodoro Rodriguez and Ing. Rafael Quintanilla and plans were completed by the Patronato, through the courtesy of Sr. Ing. Plutarco Elias Calles, for a trip into the mountains to the town of Rayones, Nuevo Leon. Many fine avocado trees of the Mexican race had been reported as growing near Rayones.

On August 3 the group left Montemorelos for Rayones in several Land Rover cars. The road to Rayones was along the bed of the Rio Pelón and the expedition forded this mountain stream 65 times en route into the mountains.

The expedition arrived at Rayones about noon. The group was met by a delegation,

including the Alcalde, Don Galimo Salinas, who guided the mission to some of the avocado plantings. There was very little fruit set on the trees because of a late spring freeze that had destroyed most of the bloom. Several promising selections of Mexican strains were found.

Most of the fruit showed severe damage from anthracnose, and this was associated with the high humidity in the area. Also, several trees were found with a large amount of fruit damaged by an unidentified seed weevil. The damage consisted of a hole in the flesh extending into the seed where one or more adult weevils were found feeding within the seed. Later the group inspected avocado seedlings on the farm of Sr. M. M. De La Fuente.

On August 4 Ing. Teodoro Rodriguez took the Valley group to the town of Hualahuises which is on the Pan American highway south of Montemorelos. Mexican and Mexican—West Indian hybrid avocados were found in the town. It seemed that Hualahuises should be re-visited and several days allotted to searching the area for promising avocados.

Literature Cited

Cooper, William C. and N. P. Maxwell. 1956. The search for avocado varieties adapted to the Rio Grande Valley. Jour. Rio Grande Valley Hort. Soc. 10:126-133.