

Recent Development in Sub-Tropical Horticulture

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The Committee on Avocados and Subtropical Fruits, in arranging its portion of the program for this session, has endeavored to present to you information showing the development which has been made in the culture of sub-tropical fruits in various sections of our State in a commercial way, as well as the most recent technical data relative to the propagation of such fruits and the control of the diseases and pests which may infest them.

Our program deals largely with the Avocado because its culture in Florida has become more general than that of any other sub-tropical fruit and information of both a commercial and technical nature regarding it is more sought after.

During the past year there have been developments which are of great interest to the Avocado grower. A number of new and very promising varieties have been fruited and some of the older varieties have shown faults which were not fully anticipated. Seedling Avocados, grown from the seed of fruit of the Guatemalan type produced in Florida, have begun to bear, and the fruit produced by these trees has given an entirely new trend to varietal propagation.

Henceforth three distinct races of Avocados have been recognized. The Mexican, which is hardy and produces fruit of fine flavor but so small in size and of such poor shipping qualities as to be hardly worth consideration as a commercial proposition; the Guatemalan, a race which provides varieties fairly cold resistant, prolific and bearing fruit of fine eating and shipping qualities but in many cases of too small size to meet the requirements of our Eastern markets; and the West Indian race, upon which the commercial culture of the Avocado in Florida has been founded and which still furnishes practically all of the fruit which is shipped out of this State. Occasional natural hybrid varieties have been brought to the attention of propagators, but heretofore these have been crosses between the Mexican and Guatemalan types. In their natural environment there has not been much opportunity for crosses of the Guatemalan and West Indian Avocados to occur, as the two races are seldom found in the same locality. But in Florida we now have West Indian and Guatemalan Avocados growing in close proximity, often blooming during the same period and, from the natural crosses which seem sure to result, we are quite likely to obtain, by selection, varieties combining the good qualities of both parents and better adapted to Florida conditions than either. Several Guatemalan seedlings of Florida origin have borne fruit during the past season and in each case this fruit has been neither straight Guatemalan nor West Indian but has shown unmistakable evidence of being a cross of the two types, having some qualities superior to that of either parent.

This winter and spring, for the first time, Guatemalan Avocados have been placed on

the northern markets in quantities sufficient to permit some idea being formed as to the reception which the consumer is going to give this fruit. At any rate enough have been shipped to make it evident that all markets do not value the Avocado alike. When Avocados sell in one city for \$42.00 per crate and in another only a few hundred miles away at \$10.00 per crate, for practically the same grade of fruit, as has been the case this season, it is apparent that neither market is giving the product its proper rating. However, while prices varied greatly, the fact that all offerings met with a ready sale, has been very encouraging to the producers.

Ranking next to the Avocado in importance, at the present time, we may safely place the Mango. That this delicious fruit has not been more heavily planted and has not reached a position commercially more prominent has been due almost wholly to the indifferent bearing qualities of the finer varieties. Such fruit as is produced by trees of the Mulgoba, Haden, Amini, Paheri and several other of the East Indian type of Mangos, would have brought about the planting of thousands of acres and would have firmly established the fruit as one of the most sought-after of all of our Florida products, were it not for the unreliable fruiting character of these trees, which so far has kept commercial Mango culture on about the same basis as lottery playing. The Bureau of Plant Industry of the United States Department of Agriculture has been working on this problem for a number of years and some of the results most recently obtained have been very encouraging. One of the papers to be presented at this session will give some interesting information along this line.

It has been heretofore accepted as a fact that Date culture on a commercial basis was limited in the United States to a few comparatively small, arid sections of California, Arizona and possibly Texas. That Dates could be successfully grown in Florida was not considered a possibility on account of climatic conditions, yet there now seems to be a fair chance that these conclusions have been in error and that this very profitable industry may be established on a commercial footing in at least one section of our State.

Dates have been produced on Key West Island and some of the adjacent keys for many years, but during the past decade the number of bearing palms has greatly increased and at the proper season ripe Dates are to be found on most of the fruit stands in the Island City. These facts have been brought to the attention of the officials of the Bureau of Plant Industry and some preliminary investigations have been made which, while not at all conclusive, are very interesting and encouraging.

The greatest obstacle in the way of Date culture in Florida has been the heavy rainfall and frequent dews during the maturing season of the fruit. The annual rainfall at Key West is hardly more than half of that at points on the southern mainland and there is said to be an almost total absence of dew throughout the period when the date is ripening. This opens possibilities for the fruit which may lead to the founding of an important industry.

A great many thousands of dollars have been spent in exploring the Date growing countries of the Orient and in importing into the United States the offshoots of the finest varieties which are grown in those regions. These varieties are now grown commercially in the Coachella Valley and a few other sections of the West and the extension of the plantings is said to be limited almost wholly by the supply of offshoots available. These

offshoots which provide the only certain means of growing the palms true to name, sell readily at from \$10.00 to \$20.00 each. During the past season the California Date growers have been able to market their first-grade fruit, after proper preparation, at from \$1.00 to \$1.50 per pound. When one considers that a full bearing Date Palm will carry an average of two pounds of fruit and that the processes of preparing this fruit for market are not more expensive than those required for most other similar products, some of the possibilities of this industry become apparent. Among the keys adjacent to Key West, there are thousands of acres of land which is too low in elevation above tide water to permit the growing of any other fruit trees but upon which the Date Palm will thrive, for the Date does not object to somewhat salty soil conditions. The growers of Dates in California, to realize the best prices for their product must get it to our Eastern markets in advance of the best Dates from the Orient and this fact is apparently going to bar the commercial growing of some of the best varieties in that State. One fact brought out by the recent investigations by the Bureau of Plant Industry has been that the time of blooming of the Date Palms on Key West Island is nearly two months earlier than in California, with probably about the same difference applying to the season of maturity. The advantage of this would be very great to the Florida Date grower.

Unfortunately when the Date offshoots were brought into this country from Asia and Africa a serious scale was introduced, which has never been eradicated. If the industry is ever to amount to anything in Florida it would be a great mistake to burden it with this pest to begin with and it is therefore not advisable to bring into the State, even for experimental purposes, offshoots of the fine varieties which might otherwise be obtained from California. This will make any possible development in this State, slower of realization than would otherwise be the case, but the initial steps have already been taken and future results will be awaited with great interest.

Here, there and anywhere within our boundaries may be found men and women working with such fruits as the Litchee, the Papaya, the Anonas, the Guavas, the Carissa, the Jujube and a host of other more or less exotic food plants. Little by little we are learning of what can or cannot be grown in sub-tropical Florida, and each one of these enthusiastic individual experimenters is doing a work of value for our State which should receive the utmost encouragement from the members of this Society.

Those of us who have lived here long enough have learned to use that phrase "waste land" very carefully when we apply it to areas within our own State, for we have seen many sections, which could be briefly described in that way with apparent safety, become bountifully productive through the introduction of some new product or the application of new methods to the production of some old staple. It must be either a very learned or a very ignorant man who will make the unqualified assertion that any section of our State is hopelessly "waste land," for at any time some hopeless crank is likely to make his dream come true and bring into profitable production some plant which will turn that particular piece of wilderness into a garden.