

EVALUATION OF LOQUATS AT THE SUB-TROPICAL EXPERIMENT STATION

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At the 1936 meetings of the Florida State Horticultural Society, Mrs. Isabelle Krome gave a paper on loquats (1). In this paper many things were discussed, including: the origin of the Oliver loquat; the possibilities of obtaining good commercial loquats by selection of seedlings; and the formation of the Florida loquat society. In a recent conversation with Mrs. Krome it was found that the loquat society did not accomplish all it set out to do, and in fact has been all but forgotten. However, since this time, the Sub-Tropical Experiment Station has been active in introducing and selecting new varieties for Florida.

Interest in the loquat has changed considerably since 1936. Few people now believe that there is any commercial future for loquats. One of the main reasons for this is that no variety of loquat has appeared that has a thick enough skin and other characteristics necessary for commercial handling. With ordinary handling, our present loquat varieties will keep only for a day or two. Some will break down over night. Present interest in loquats is based on their use as dooryard fruit trees and ornamentals. In fact, the trend seems to be away from grafted varieties, and some nurseries that formerly propagated improved varieties now grow only seedlings. This is as true in California as it is in Florida.

In view of this trend, our experience at the Sub-Tropical Experiment Station should be of interest. Since 1932, several hundred seedlings have been grown. Many good selections have been obtained from these seedlings, and it has been found that the average seedling loquat is generally acceptable in quality to the back-yard grower who eats a few fruit off the tree each year but allows the rest to rot. For those who are interested in cooking or preserving the fruit, grafted varieties are essential. In a recent evaluation of 76 seedling trees

growing in one of our windbreaks, 46 were of fair or good quality. Probably none was superior to varieties that have already been named and propagated. Three of these seedlings have been propagated for further evaluation and comparison with standard varieties.

Many standard varieties of loquat have been tested by the Sub-Tropical Experiment Station. In 1932, Advance, Champagne and Early Red were obtained from the Coral Reef Nurseries. Since this first planting, the following varieties have been tested: Premier, Tanaka, Thales, Oliver, Thursby, Gold Nugget, Christmas, Sherry, Red Royal, Fletcher, and Seedless. In 1950 the Sub-Tropical Experiment Station selected three seedlings for propagation and they were propagated under numbers. Of these, only SES No. 4, a seedling of Advance, has been propagated to any extent commercially.

Advance and Champagne have white or very light yellow flesh. Both are of fairly good quality and size. Advance produces heavier crops than Champagne. Two other white fleshed varieties at the Sub-Tropical Experiment Station are Thursby and SES No. 1. Thursby has small fruit and has not yielded large crops. SES No. 1 is about equal to Advance and Champagne is desirable qualities.

Tanaka and Thales have often been considered as the same variety. As grown at the Sub-Tropical Station they are different. Thales has larger leaves and a more erect growth habit. The fruit from both is similar and inferior in quality. The fruit is small and orange fleshed. The Tanaka variety is the most irregular in bearing habit of all varieties grown at Homestead. It will often begin ripening fruit in December and mature some fruit on through April. In 1960 it produced a small crop in August and September. The Christmas variety was introduced as a variety which would ripen very early, supposedly at Christmas time. It doesn't always ripen this early, and in 1960 it was almost the last variety to ripen. The fruit has orange flesh and is inferior in quality. The Sherry variety and SES No. 4 are yellow-fleshed, high quality, and very similar. They both must be allowed to become fully ripe before they are sweet. They ripen later

than most varieties. They are good for cooking.

The variety, Gold Nugget is said to be a synonym of Thales. However, the Gold Nugget at the Sub-Tropical Experiment Station is different from both Tanaka and Thales. The tree is much more upright and the fruit is larger, rounder and later in ripening. The fruit is tart when fully colored, and the tree is a shy bearer. This variety cannot be recommended for South Florida conditions.

The Oliver variety which was described by Mrs. Krome in 1936 remains one of our choicest varieties. It bears heavily and the fruit is good to eat out of hand or cooked. Although

many people like the flavor of other varieties better, the Oliver is propagated at present more than any other variety in Dade County. It has an orange colored flesh and ripens in mid-season.

Among new varieties at the Sub-Tropical Experiment Station, Fletcher and Red Royal may show some promise. Both varieties have very deep orange flesh though it is not a true red. These will need further evaluation before they can be compared with other varieties. A so-called seedless variety has also been obtained but it has not yet produced a crop.

REFERENCE

1. Krome, Mrs. I. 1936. Loquats. Fla. State Hort. Soc. Proc. 49: 143-145.

SPECIES OF FICUS SUSCEPTIBLE TO THE FIG MOSAIC VIRUS

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In April, 1958, several hundred fig plants, *Ficus carica* L., from Italy, grown under post entry permit, and several hundred fig plants from California were found in Florida, and all were infected with the fig mosaic virus. The disease was successfully transmitted from affected to healthy fig plants by budding. Studies were initiated to determine possible susceptibility of other moraceous plants growing in Florida to this virus disease.

Condit and Horne (1) first reported fig mosaic from California in 1933, and later from Texas in 1941 (2). Pittman, in 1935, (5) recorded the presence of this disease in England, Puerto Rico, Kwangtung and Nanking, China, and New South Wales, Australia, and Ti and Procter (4) in New Zealand in 1944. It was reported from Georgia by Garren (3) in 1947.

Condit and Horne (1) first described the viral disease on *Ficus carica* and reported that it occurred on practically all varieties of fig wherever grown in California. They named *Ficus altissima*, *F. krishna* and *F. tsida* as specific hosts. (2). Li and Procter (4) suspected *F. retusa*, *F. repens*, *F. australis* and *F. macrophylla* of showing symptoms of the disease, but transmission from diseased to healthy plants of these varieties was not demonstrated.

Since 1958, virus-free plants in the family

Moraceae, including those in the genus *Ficus* and additional ones from other genera, have been inoculated with buds infected with fig mosaic. One plant in the genus *Cudrania* and seven species of *Ficus* have been found to be susceptible to this virus. The degree of mottling ranged from slight to severe, depending upon the response by the individual plants. The following species have been found susceptible: *Ficus lucescens*, (*F. wightiana*), *F. jacquinifolia*, *F. rubiginosa* (*F. australis*), *F. retusa*, (*F. nitida*), *F. mallatocarpa*, *F. glomerata*, an unidentified species of *Ficus*, and *Cudrania tricuspidata*.

All the species listed above are new hosts for this virus, with the possible exception of *F. rubiginosa* (*F. australis*), although it was reported from New Zealand as a suspected host by Ti and Procter in 1944. (4). *Cudrania tricuspidata* also is a new host, and is the first plant outside of the genus *Ficus* found to be susceptible to this disease.

Eleven other moraceous plants have been inoculated by budding from virus-infected plants. To date, none of them have shown any symptoms suggestive of this disease. Currently, they are under test to see if they are symptomless carriers of the virus. Those inoculated plants which show no symptoms after from six to fifteen months are as follows: *Morus rubra*, *Humulus americanus*, *Ficus lyrata* (*F. pandurata*), *F. religiosa*, *F. elastica*, *F. aurea*, *F. quercifolia*, *F. calophylloides*, *F. kirstingii*, *F. radulina* and *F. vogelii*.