

GUATEMALAN AND MEXICAN AVOCADOS FRUITING IN FLORIDA

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Mr. President, Ladies and Gentlemen:

The avocado which has been grown commonly in Florida is of the tropical or West Indian type, and only within the past fifteen years have any of the Guatemalan type been tried.

The first were from seeds introduced by the Bureau of Plant Industry, and afterwards we began getting scions, and occasionally a budded tree from California. The scions were mainly used for top-working old trees by cleft grafting which produced fruit in a few years' time. Thus we fruited many of the California introductions almost as soon as they bore in California. In like manner several of the new introductions made in 1916 and 1917 by Wilson Popenoe for the Bureau of Plant Industry have already fruited here, and many more are setting fruit this season and promise to give a good account of themselves next winter. Of the former, Nimlioh (44440) produced some typical fruit, corresponding closely in every particular to his official description, and ripening in March.

Panchoy (44625) ripened in December, and proved exactly identical with the official description in every particular. It is also a good grower.

Lamat (43476) made one fruit, which was delayed in shipment to Washington, so that it spoiled before it was received. It does not appear as vigorous a grower as the other two.

Of the California introductions, Blakeman has fruited for two years, and produces fruit of good quality, weighing up to 1 1/2 pounds, and maturing in January and February. It seems generally a good grower, though differing in that respect in localities.

Champion has not proven successful and has been abandoned.

Dickey has been fruiting with Mr. Cellon at Buena Vista, and seems to be a good grower, productive and of good size and appearance, as well as quality. But it is so difficult to propagate that he has but two trees of it. The season is November, rather early for the best markets in Florida.

Dickinson is doing better in some places than others, but as yet has not matured any fruit.

Lyon has so far shown an exaggeration of the faults it has in California, and what fruit has been produced generally cracked before maturity.

Meserve I have abandoned, because of lack of vigor, but Mr. Krome has trees which are doing fairly well and have produced good fruit weighing 16 to 18 oz., ripe in January

and February. It has done as well at the station at Miami.

Royal was fruited by Mr. Hendry at Ft. Myers, but was very small and deemed by him as worthless. From this variety, Walker's Royal, strange as it may seem, have come two seedlings which are now among our most popular commercial varieties, and many acres are being planted to them in Dade County this year. They are *Taylor* and *Wagner*. It seems that the two seeds were taken from specimens of Walker's Royal sent to Washington, and one seedling was sent to California, and became the parent tree of *Wagner*, while the other, planted at the Miami Experiment Station has become our *Taylor*.

Wagner has been bearing for Mr. Krone two seasons, and he has had fruit as large as 22 oz., though the average weight is considerably less. The quality is good and it seems to be a free bearer, while it begins bearing young. The season is January and February.

Taylor, the Florida brother of the above, has been bearing 5 or 6 years and has proven a reliable cropper of fair quality and medium size, strongly resembling *Wagner* in foliage and habit of growth, but more vigorous and not quite as good in flavor. Its season is January and February. This variety has made a record which entitles it to recognition as of commercial value.

Atlixco has shown superior quality and excellent size, averaging 20 to 24 oz., and running up to 26; season, February and March; good grower.

Fuerte has shown itself universally an excellent, thrifty grower and generally a good bearer. Some find it maturing in November while others find it a December, January and February fruit. This difference may be due to the fact that avocados of this type often blossom several times and sometimes the early bloom will make the crop while in other instances it may be a later bloom. Mr. Cellon complains that he sometimes finds fruit injured by hard spots, but this does not seem by any means a universal complaint.

Solano is another variety upon which there is a great difference of opinion. Some find that it ripens too early with them (October) and complain that it is lacking in richness. Mr. Cellon finds nothing to complain of on that score and his fruit holds well into December and January. All agree that it is a splendid grower, a handsome fruit and that the seed is small and no fibre present.

Knight's Linda has fruited and produced some large specimens weighing 36 oz., of excellent quality, ripe in March. It is a good grower, like all of the introductions of Mr. Knight, and may prove very valuable after a few more years' test.

Rey has fruited this year, but the fruit was quite small.

Queen and *Knight* have not matured fruit yet in Florida.

Sharpless has not yet fruited but promises fairly well, though not as sturdy and vigorous as some of the California introductions like *Spinks* and *Grande*. The latter has been fruited four or five years but reports disagree as to time of ripening, though all seem to agree that it is a fine grower and a large fruit of fair quality. Season from October to January.

Spinks is a vigorous grower and promises to be prolific, but has not been under test long enough to establish either its season of maturity or productiveness. What fruit the

writer has grown matured in November, but the first crops upon young grafts on old stocks often ripen prematurely. Size about 25 oz. and quality good.

Nutmeg has shown a tendency to develop hard lumps inside the fruit like detached pieces of rind, which scatter through the fruit and ruin its value.

McDonald ripens in February and March, and is of fair quality and quite productive, though the size of the fruit on the same tree varies greatly—from 8 to 24 oz. in some instances.

Schmidt has shown itself a good grower and of good appearance, size and flavor. Some complain of the presence of fibre, while others do not and deem it a valuable variety worthy of general planting. Season, March and April.

Verde produces a good fruit of medium size and excellent appearance, but distinctly pear shaped, ripening in January and February. Tree a good grower.

Perfecto is a splendid, upright, free grower and good producer in some localities. The shape is against it, being elongated pear shape, but the quality is fair; weight about 20 oz.; ripens in November and December. My own experience with Perfecto has been unfortunate, as 4-year-old grafts 15 to 20 ft. high have so far failed to hold fruit.

Taft has given quite general satisfaction, though in some places it does not seem to do as well as in others. On the whole it may be classed as a good reliable tree to plant for February market, the fruit being of superior quality and medium size. It does not show any precocity, usually taking a year longer to commence bearing than the average, but this is not by any means a bad fault, and promises a longer bearing period with better crops due to larger bearing surface.

Collins, Celia and Winslow are seedlings grown at the Miami Experiment Station, and are wonderfully thrifty growers, as well as heavy yielders. The size of the first two preclude their ever becoming commercial successes. Winslow, while small (10 to 15 ounces), is large enough to find a ready sale, one-half of a fruit making enough to serve as a single portion. It is a regular and free bearer, though the latest we have, being marketable in March, but not attaining its full richness till April, and seldom beginning to drop before May. It has been held on the trees into August, but April is its best season. Green rind, yellow meat and nearly round in shape, slightly one-sided, but hardly enough to notice.

There is a seedling from this which has not as yet been named, that was line-grafted onto an old stump by Prof. P. H. Relfs at his place at Buena Vista so that in two years it fruited. The fruit ripened last November, and in shape was an exact reproduction of the parent but nearly three times as large. The rind was smooth, like the West Indian type, and this, taken with the season of maturity and large size, makes it seem probable that it is a natural hybrid, as the parent tree was surrounded by West Indian trees all in bloom when it was set.

Mexican stock does not thrive in South Florida sand, and most of the trees brought in from California being on this root, have failed to succeed. On West Indian stock they do very well and in the middle and northern parts of the state where there is a clay subsoil, seedlings of this type seem very much at home.

Of the California introductions Harman produces a small fruit, with a glossy greenish-purple surface and loose seed. The cream-yellow flesh is of fine buttery quality and rich flavor. It is a good grower and heavy bearer, ripening in July and August.

San Sebastian on West Indian roots is a tremendous grower and ripens its fruit in June and July when good fruit is scarce. It is a good bearer of excellent quality; though averaging small (10 to 11 oz., sometimes 13) it is well worthy of extensive planting, particularly in the colder sections.

Gottfried is a seedling of Mexican type that was grown from a seed sent from South America. The original tree is enormous and the fruit is the largest of the Mexican type that we know of. It averages about a pound, and runs up to 20 oz. Pear shaped, purplish-black, seed inclined to be loose, and skin peeling readily. In quality it is excellent, free from fibre or essential oil flavor, rich and smooth, yellow meat; season August.