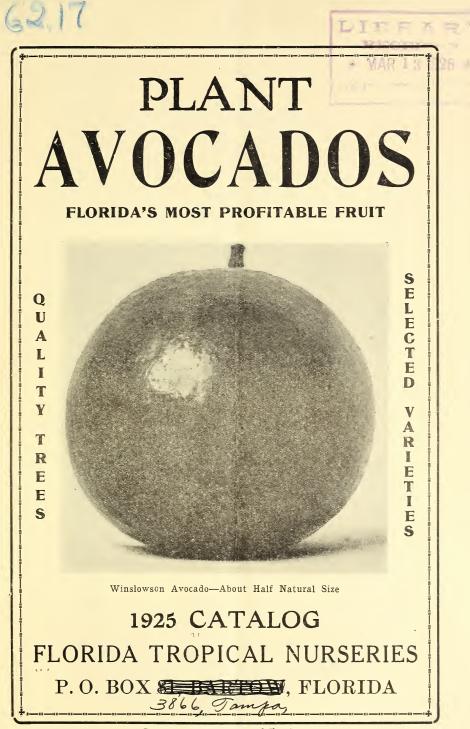
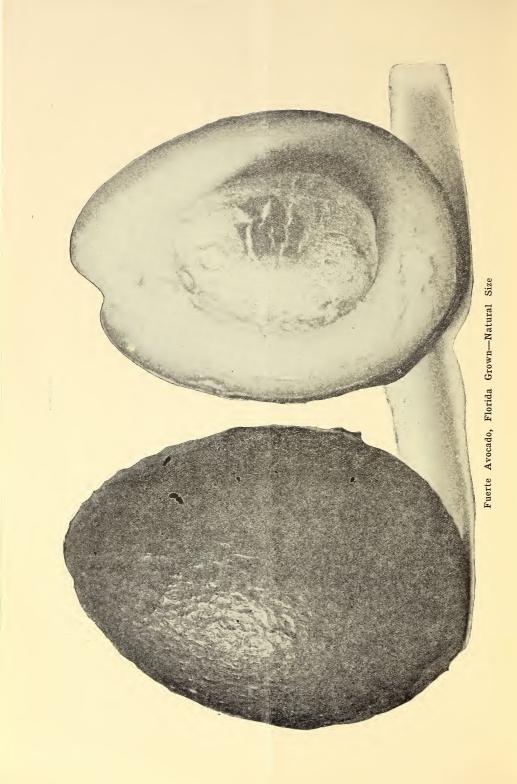
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# THE AVOCADO

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This is the newest and most valuable addition contributed to the American menu since America's discovery. It has aroused the interest and enthusiasm of men with money and imagination—of men who work at what they like rather than what they must. They have financed expeditions to explore for new varieties and study the habits of the avocado in countries where its fruit is a staple article of food among the inhabitants.

In point of food value the avocado outranks all other fruits, being a complete food, with practically the same food value as milk or eggs, as well as being palatable and delicious. The chief value of the avocado as food is due to its high fat content, which varies from about 9.8 per cent to 31 per cent.

Data on actual profits in avocado growing is not readily available, as the industry on a large scale is in its infancy, but the figures we have given indicate a generous reward for the grower. Many individual trees have returned thousands of dollars. There are no crop failures, such as peaches and other crops must undergo occasionally. There seems to be no limit to the age of an avocado tree. It grows larger and larger with age, and accordingly increases its yield, attaining a height of thirty to forty feet.

There appears no longer any question as to the fine adaptability of the soil and climate of a limited area of southern Florida for the successful propagation of the avocado, and some competent growers contend that, by reason of our superior climatic conditions, California, which now produces some of this fruit, will never be a competitor of Florida in the avocado market. It may be said, therefore, that our south Florida has virtually a monopoly on the avocado industry at this time.—Editorial, April 8, 1924, Tampa Morning Tribune.

#### FUERTE

#### THE MOST POPULAR AVOCADO

The Fuerte is a Mexican-Guatemalan hybrid and has found great favor with growers in Florida and California. The trees are unusually vigorous growers, bear at an early age and produce a good crop of fruit year after year, unlike most other winter bearing avocados which bear a good crop only every other year. It is not unusual for this variety to bear a profitable crop the third year and very often bears some fruit at two years from planting. It also differs from most other varieties in that it has a long season of ripening, December to April, maturing most of its fruit during January, February and March, when prices are highest.

Fuerte trees are very resistant to cold, having withstood 22 degrees in Florida when in bloom and fruit with practically no damage. The Fuerte also came through a temperature of 16 degrees during the severe freeze in California in 1922 with comparatively little injury. The Fuerte will withstand cold that would severely injure orange trees, and due to its hardiness and its many good qualities, it deserves special consideration.

The fruit is oblong to pyriform in shape, not necked, skin thin and hard, color green, weight about a pound to a pound and a half, seed medium to small and tight in the cavity, flesh cream yellow, smooth, well flavored and is about the richest avocado known. (See illustration).

The Fuerte is one of the best, if not the very best avocado for commercial planting. We have at our nursery Fuerte trees which at two years and three months from planting had a spread of 16 feet and a height of over 10 feet. Visitors are welcome at our nursery and we are glad to show these trees.

See "History of the Fuerte Avocado" attached.

LULA—A Mexican-Guatemalan hybrid. Season November to January. Color green, weight about a pound to a pound and a half, medium tight seed, flesh pale straw color and of excellent quality. The Lula is a very hardy variety and prolific. (It will withstand about as much cold as the Fuerte.) We recommend it highly, especially for those sections where there is a risk from cold to be considered. A good keeper and shipper.

WINSLOWSON—A Guatemalan-West Indian hybrid. This variety is a vigorous grower, an early regular and heavy bearer. Season November and December. Shape of fruit nearly round, (see front cover) color dark glossy green and very attractive, weight one and one-half to two pounds, seed medium and tight. Flesh yellow, smooth and of excellent quality. An ideal shipper and keeper. The Winslowson is a very popular variety and was extensively planted in 1924. We consider it one of the most profitable avocados.

#### HISTORY OF THE FUERTE AVOCADO

By Wilson Popence

reading the report of the origin and characteristics of the Fuerte avocado made to the Department of Agriculture hy Mr. Wilson Popence, who was sent to Mexico to make official iuvestigation.

Fnerte is at present the most extensively planted and is generally cousidered the most promising of all the avocados which have heen introduced into the United States from Atlixco. My desire to see the parent tree was the principal motive for undertaking the trip of which this paper is the report. I felt that North American avocado growers should know as much as possible about Fuerte; if it was representative of a race or group cultivated in Atlixco, and there were hetter varieties of the same general character to be obtained, then we should not plant it too extensively; if on the other hand it proved to be unique, and superior to the other avocados of its region, we could enlarge our plantings with greater confidence.

Perhaps 1 can most accurately present my observations on this variety by quoting from my journal entry of December 19, 1918:

"This morning I went out with Carl Schmidt's notes and diagrams to hunt up some of the avocados which have been progagated in California.

"Fuerte was the variety I was most desirous of finding. After considerable search 1 succeeded in locating it. Schmidt gave name of the owner as Matildi Dion. This is incorrect. The owner is Alejandro Le Blanc. a Frenchman by hirth, now a Mexican citizen; Matildi Dion, now dead, was a relative of his and formerly lived on the property, which is situated at No. 2 Calle Manuel Buen Rastro.

"The son of Alejandro Le Blanc, a decidedly Simpatico young fellow, showed me over the place and told me everything he could about the Fuerte tree.

"On a small branch I found the copper label put on by Carl Schmidt in 1911. It bore simply the number 15, which is the serial number under which Schmidt sent hudwood of the variety to California in 1911. Le Blanc told me he had heen careful to preserve this lahel, having loosened the wire on several occasions when it was cutting the limb.

"In this tree Le Blanc possesses something of unusual character as well as merit, and he knows it. The family is so fond of the fruit that they always keep the entire crop for their own use. Not only do they consider the flavor unusually rich, but they say the seed is exceptionally small, leaving an abundance of meat. In addition, the tree is peculiar in that it ripens its fruits over a much longer period than any other known to them. They call it "ahnacate verde" because it remains green in color when ripe. They know when the fruit is ready to be picked by the yellowish tinge which it assumes on one side.

"Young Le Blanc says they picked about 200 fruits last month (November), and there are about 200 more on the tree which are maturing very slowly. Most of them will not be ready for picking until January or February. The tree is now putting forth a few flowers. Unquestionably its fruiting babits are pecullar. Le Blanc says that it bears every year but that some seasons it produces heavier crops nia. No trees were found which closely re- slbilities?

crop, hut says if the tree were given better looked particularly for such. care it would yield a thousand.

"The age of the tree is not known. Le Blanc, after having investigated the matter as carefully as possible, helieves it to be hetween 55 and 60 years. In 1911 Carl Schmidt, in his notes on the variety, estimated the age at 25 years, a figure which Le Blanc at that time thought to be correct.

"The form of the tree is rare. It is very broad and spreading, though not drooping. The main llmhs extend almost horizontally from the trunk. The crown cannot be considered large. 1 have taken the following measurements:

Circumference of trunk at ground \_\_\_\_\_69 ins. Distance from ground to first hranches \_\_5 ft. Greatest spread of crown \_\_\_\_\_33 ft. Number of main branches \_\_\_\_\_5 Height, approximately \_\_\_\_\_27 ft.

"The tree is growing in the corner of Le-Blanc's huerta, with a high wall near it on one side, and the house not far away on another side. The ground beneath its hranches is clean and level, hut not cultivated in any way. Le Blanc tells me the tree receivss plenty of water; in addition to that which reaches it when the huerta is irrigated, there is a drain below the surface of the ground, a few feet from the trunk, and doubtless the seepage is considerable. In appearance the tree is healthy and vigorous."

"In the 1916 Report of the Callfornia Avocado Association, appears a photograph of two entire and two half fruits, one of each round, the other ohlong-pyriform. Beneath this photograph is the following legend: "Bud variation in Fuerte avocado (one-half natural size.)" On right normal Fuerte fruit, on left round fruit of Redondo type produced on the same hudded tree of the Fuerte on the ranch of Mr. J. T. Wheedon, at Yorba Linda, Cal. The tendency of this variety to produce two types of fruit is said to he the cause for the naming of the two varieties, Fuerte and Redondo, when they were imported from Mexico. The Redondo is now known to be the round fruited bud variation of the Fuerte."

1 found no fruits on the parent Fuerte tree which varied strikingly from the typs. Redondo is a distinct variety, not to be confused with Fuerte: the parent tree, which 1 have examined, is growing in the garden of Salvador Amor, as indicated by Schmidt in his notes. The frult is very thick skinned, and in size and form resembles Challenge. Redondo, is a true Gautemalan in every respect.

The probability of Fuerte being a cross between the Mexican and Guatsmalan races has been discussed in print on several occassions. Scarcely had the variety commenced to fruit in California when this was suggested as a hypothesis to account for some of its extraordinary characteristics, and as time has passed, belief in its hybrid origin has grown stronger. Doubt always remained in my mInd, however, until 1 visited Atlixco. 1 had suspicioned that Fuerte might represent a distinct race found in that region. I found nothing to indicate, however, that Atllxco possesses any races or groups not already known to us. The Mexican and the Guatemalan, as grown in Atlixco, differ in no important characteristics from these races as we know them in Callfor-

Florida avocado growers will be interested in | thau others. He thinks 600 fruits is a good | sembled Fuerte in habit and fruit, though 1

l feel, therefore, that it is now more reasonable than ever to believe that this variety is a hybrid. lu certain of its characteristics we have indications of its hybrid nature, and additonal evidence has recently been furnished hy the behavior of its seedlings. A number of these have been grown at the U. S. Plant Introductiou Garden, Miami, Florida. Some of them closely resemble the parent in foliage, including the possession of the aniselike odor which has been taken, in Fuerte, to indicate Mexican blood, juasmuch as this odor is never present in true Guatemalans or West Indians. Others are typical Guatemalans in appearance, and have lost the anise-like odor. It will he interesting to watch these seedlings come into hearing. It is possible, of course, that some of them are the result of cross-pollination, flowers of the Fuerte having been visited hy insects carrying pollen from trees of other varieties; hut their hehavior is decidedly different from that of ordinary avocado seedlings.

While it has not been possible for me to keep in close touch with the avocado industry in California during the past few years, I had formed a high opinion of Fuerte from what I bad seen and heard of its hehavior in that state. In Florida also, it has shown much promise. My visit to Atlixco served to increase my confidence in this variety, and I helieve any California avocado grower who could have shared my week there would have come to feel the same way. Let me, if I can, make my position clear.

We have recognized that Fuerte was an unusual variety, and its hardiness, its vigorous growth, its tendency to fruit while very young, its season of ripening, and the excellent quality of its fruit have comhined to make us realize that it possessed exceptional value. But always we have felt that perhaps in the region from which it came there were even better varities which we could and should obtain; that Fuerte, in other words, might be representative of a group or race occurring in southern Mexico, and that by a brief search we might obtain other and more valuable varieties of the same race. A visit to Atlixco has served to clear away these douhts, and make me realize that in Fuerte we have secured a unique avocado.

Imagine that you have gone to Alixco in my place. You found good avocados-many of them excellent avocados-all ahout you. Guatemalan varieties of large size and good quality, and Mexican varieties hetter than those of almost any other region. You looksd over these fruits and were delighted with them. Then you came upon a single tree of rather distinct character, and found that Its fruit was reputed to he as good as the best Gautemalan, while it had a ripening season which exactly met your requirements-a thing which most Gautemalans do not possess. Would it not attract your attention? And as you examined it more carefully, and found that the fruit was not only of excellent quality, but that it had a tough skin and a very small seed; that the tree bore regularly and abundantly; that the ripening season was unusually long; and that it was a vlgorous grower and hardisr than any known variety of the Gautemalan racs; would you not hecome enthusiastic about its pos-

**COLLINSON**—A Guatemalan-West Indian hybrid. Ripens in February and March. Prolific. The fruit is nearly round and much resembles the Winslowson, but somewhat smaller, weight from one to one and onehalf pounds, color green and glossy, seed medium and tight, flesh deep yellow, smooth and of a very rich and nutty flavor. We recommend the Collinson very highly and believe it to be among the best varieties for commercial planting. The fruit is of excellent quality and of the most desirable size, shape, color, and ripens during the period of highest prices. A good shipper and keeper.

**PANCHOY**—A pure Guatemalan variety. Season December to February. The tree is a vigorous grower and a regular and prolific bearer. This variety has made three good crops in Florida three consecutive years. The fruit is almost round, dark green in color, surface pebbled and glossy, weight one to one and one-half pounds, small tight-fitting seed, golden yellow flesh, unusually rich in flavor, quality unsurpassed. A good keeper and shipper.

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The FUERTE and LULA varieties will withstand much more cold than citrus.

The WINSLOWSON, COLLINSON and PANCHOY will withstand about as much cold as citrus.

### Planting and Culture

In planting Avocado trees on rolling or high lands we advise preparing the holes for the trees a few weeks in advance of the time it is planned to set them. Dig the holes two feet deep and two or three feet across. Mix a half bushel or bushel of stable manure or compost with the top soil and place in the bottom of the hole and allow to decay for several weeks before planting. If manure or compost is not obtainable a little bone meal will answer as well, with a tobacco mulch to complete the fertilizer.

In flatwoods plantings it is advisable to dig down and ascertain if the soil is underlaid with hardpan or pock, and if so, blast each tree hole several feet deep before preparation, to break up this hard layer and allow the roots to penetrate deeper into the soil and also to give better drainage, as the avocado will not stand wet feet.

In setting the tree lay the box flat on the surface of the ground and pry off the bottom. Then place the hand across the bottom and lower the box into the hole, having the hole prepared so that the tree will be set several inches deeper than it was grown. When the plant is set firmly and upright in the bottom of the hole, insert a chisel between the side boards and loosen the same at one corner, when the sides may be slipped off the dirt ball. The hole may then be filled and the soil firmly tamped and a pail of water poured in the basin left around the tree. The trees should not be allowed to want for water, especially the first year while they are getting started. The first year's care is most important. It is a good plan to shade the trees after planting until they begin to put forth new growth. Four stakes or plastering lath will answer for this purpose, with a piece of burlap stretched across the top and fastened. This will furnish a partial shade from 9 a. m. to 3 p. m.

The best time to plant avocados is from early spring, as soon as the risk from frost is past until early fall, preferably around the first of April: As the plants are grown in boxes the roots are not exposed or disturbed in planting and the tree therefore receives no shock. When planted in the early spring, it has a full growing season ahead in which to become established before the winter dormant season comes on.

The avocado thrives on organic fertilizers such as horse, cow, goat or chicken manures, or commercial fertilizers rich in bone meal, tankage, tobacco stems, manures, etc., analyzing around 5-7-6. The avocado will stand forcing that would prove disastrous to citrus trees and in fact the more vigorous it is caused to grow the first few years the better tree it will ultimately make. We have at our nursery trees which at two years and three months had a spread of 16 feet and a height of over 10 feet. These trees were fertilized up to that time with stable manure only.

Outside of fertilization, the culture of the avocado is the same as for citrus. A mulch of hay, leaves, etc. around the tree is beneficial as it prevents the sun's rays from burning the tender rootlets near the surface and also conserves moisture.

While young all avocados are subject to injury from frost. While small a hamper or barrel may be placed beside each tree and used to cover it when frost is threatened. The second year the trunk and larger limbs may be wrapped with paper as an additional safeguard to the banking with sand which is generally relied upon.

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