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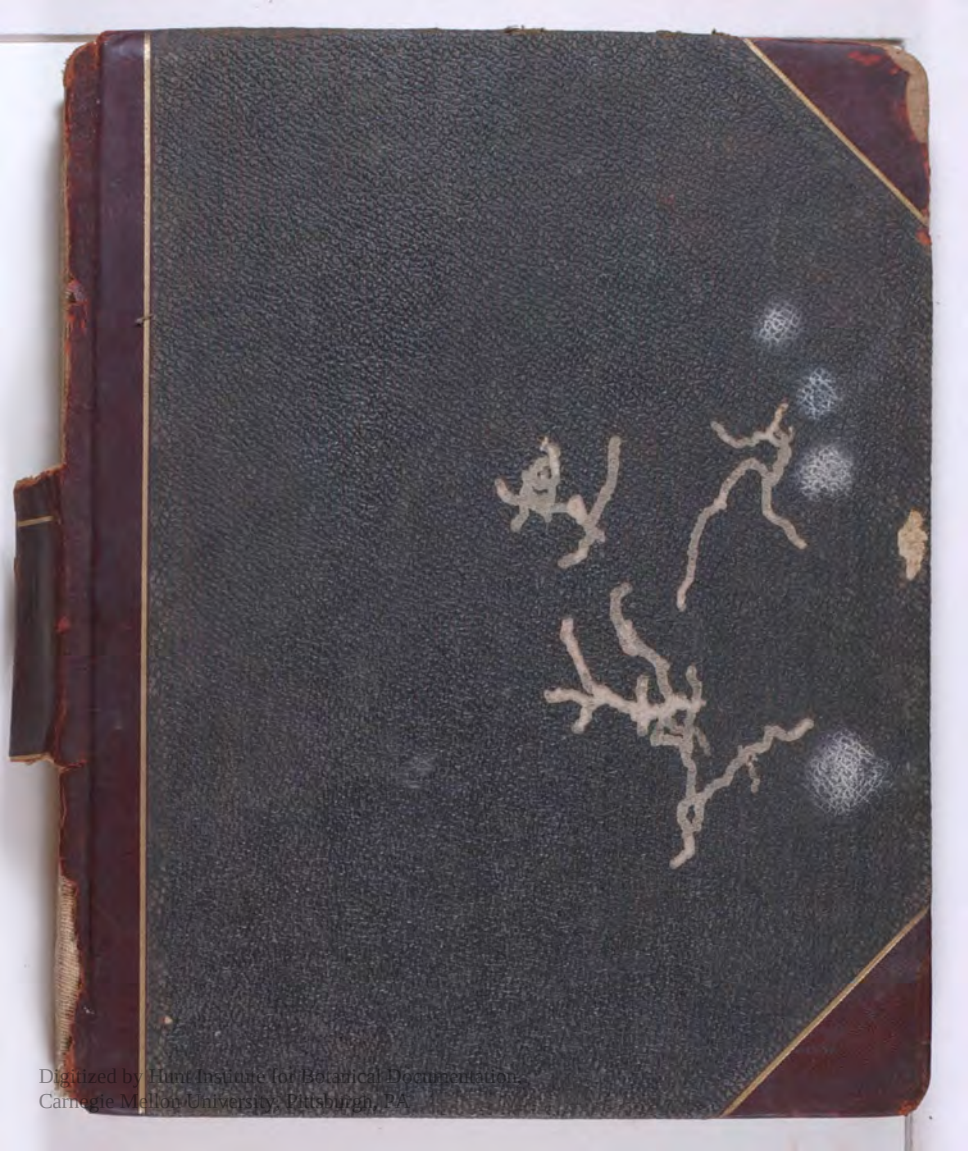
Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.



THE AVOCADO

By Professor Ira J. Condit, of the College of Agriculture,
University of California
Published by the California Avocado Association

The avocado, erroneously called alligator pear, is one of the newer fruits to attract the attention of commercial growers in Southern California. New and yet old, for trees were planted at San Gabriel as early as 1856 and at Santa Barbara as early as 1871[1]. Not until it became generally known that avocado trees around Hollywood, Santa Ana, Orange, and Monrovia were bearing hundreds of fruits selling for almost as many dollars, did nurserymen and growers realize the tremendous possibilities of this "vegetable butter," this "natural mayonnaise" as a money maker. In recent years hundreds of seedlings in various parts of the state from San Diego to Butte County have fruited, tens of thousands of trees of about forty different varieties have been propagated, and over two hundred and fifty acres have been planted in orchard form.

THE FRUIT

As shown in the accompanying illustration, the fruit consists of an outer skin or rind, a central, hard seed, and the yellow edible portion between. The fruits vary in size from one to four or five inches, in shape from round to oblong, pear-shaped, or even bottle-necked, in weight from a few ounces up to three pounds, and in color from green to various shades of red, brown, and purplish-black. The flesh is soft and buttery in its texture and is free from fiber in the best varieties.

THE TREE

The avocado tree is a broad-leaved evergreen, often sixty feet tall or more, resembling somewhat the evergreen magnolia. There are three types[2] now being grown: the Mexican type[3], with leaves which have a strong odor and flavor of anise, and with fruit which has a thin, papery skin; the Guatemalan type[4], the leaves of which give practically no odor of anise, and whose fruit has a thick, granular rind; the West Indian type, bearing leaves without anise odor and fruit having a thick, leathery skin without granules. The Guatemalan type is being most largely planted commercially in California on account of the large size and excellent shipping qualities of the fruit.

(1) History—Report of the California Avocado Association for 1916, p. 105.
(2) Types—Report for 1915, p. 45.
(3) Mexican type—Report for 1916, p. 73.
(4) Guatemalan type—Report for 1917, p. 112.

Tuesday Washington D.C Feb. 3, 1919

Mr. Bisset desires that I visit the following people in Florida:

Daniel McConville, Fort Pierce (just at the end of Indian river) (now at 1242 21st, Washington). Avocados have already been ordered out to him. He gets 3 plants of each number in list.

J. N. Collins, Miami Beach Improvement Co. Miami. Has recd some buds, but was not very successful with them. Has been written, asking if he wants plants.

B. A. Waldin, Homestead. Nothing recd yet. Is to receive plants.

Jack Taylor, Moore Haven, in charge of experiment station of the Land Company. None of the Guatemalan material yet sent him.

John Kemble, Avon Park. This man is now at Brooksville, but his property should be looked up. A man named Donaldson also wants some trees here, + should be visited. Donaldson is listed; see him.

Harry P Johnson Bokeelia, on Pine Island. Go down on mail boat from Punta Gorda. Has nice beds and believes to have them established. To receive a set of trees as well.

Chris Johnson, Marco. Has not rec'd any Guatemalan material as yet.

Warren F. Purdy Long Boat Key, near Sarasota. Has five beds of the Guatemalans.

L.B Skinner, Dunedin. No Guatemalan material yet rec'd. Are conditions favorable?

Other points to be visited.

Gratigny. During estate matters.

West Palm Beach

Glen Saint Mary

Orieco

Gainesville

St Petersburg

Brooksville

Gothas - to see Nefeling. Best way to reach it. go to Orlando. Send from there. He will take me with auto.

Fort Myers

Merritts Island

Winter Haven (Glen St Mary Citrus stock)

Tampa - Jacksonville

Outside of Florida

Savannah, Georgia

Distribution of Persea's Guatemalan Avocado Collection.

Figures in columns indicate number of budsticks sent to cooperators unless otherwise indicated.

S.P.I. No.	Variety	
43476	3	LAMAT.
43560	6	KANOLA.
43602	7	ISHKAL.
43932	8	COBAN
43934	10	KASHLAN
43935	11	CHISOY
44785	12	PANKAY.
44439	15	NABAL.
44440	17	NIMLICH.
44625	18	PANCHOY
44627	20	TUMIN.
44626	21	BENIK.
44679	22	KEKCHI.
44680	23	MAYAPAN.
44681	25	KAYAB
45560	26	MANIK.
44782	27	CABNAL
44783	28	CANTEL
44856	30	TERTCH
45505	32	AKBAL
45562	34	ISHIM
45563	35	KANAN
45564	36	CHABIN

Hart & Barber, Los Angeles	3	3	3			3					3	3			3			3	3								
Wm. Herrlich, San Gabriel.	2	2	2			—		2			2	2			2			2	2								
Fancher Creek Nurseries	3	3	3			3		3			3	3			3			3	3								
W. G. Fraser, Riverside,	3	3	3			3		3			3	3			3			3	3								
E. E. Knight, Yorba Linda.	3	3	3			3		3			3	3			3			3	3								
A. R. Rideout, Whittier,	1	1	1					1			1	1			1			1	1								
Thos. H. Shedden, Monrovia.	3	3	3			3		3			3	3			3			3	3								
Wm. A. Spinks, Duarte.	1	1	1					1			5	1			1			1	2								
C. P. Taft, Orange,																											
Dr. H. J. Webber, Riverside,	3	3	3			3		3			3	3			3			3	3								
Agric. Dept. of West India Gardens, Altadena.	3	4	3			3		3	1		3	3			3			4	4								
J. B. McLaughlin, Los Angeles.	1	1	1					1			1	1			1			1	1								
Geo. B. Cellon, Miami, FLA.	1					1					1	1						1	1								
Geo. C. McClure. Coral Reef Nurseries, Miami.	1	1	1			1					1	1			1			1	1	1							
John B. Beach, West Palm Beach.						1																					
Royal Palm Nurseries, Oneco.	1	1	1			1					1	1			1			1	1								
Glen St. Mary Nurseries, Winter Haven																											
L. D. Niles, Lucerne Park	2	2	2			1	1	1			2	1			1			2	1	1							
Gillespie Bros., Little River.																											
Miami Beach Orchard Co, Miami.	1	1	1			1					1	1			1			1	1	1							
Hugh Matheson, Cocoanut Grove.																											
H. P. Johnston, Bonsella.																											
J. T. Gratigny, Buena Vista	1	1	1			1					1	1			1			1	1	1							

GUATEMALAN AVOCADO COLLECTION - BUDDED PLANTS

Two to (Five plants each of the following listed varieties to be sent to sixteen cooperators.)

Popenoe's No.	S.P.I. No.	Variety	Plants at Yarrow 12" or more	Plants at Yarrow Under 12"	Plants in Det'n House 12" or more	Plants in Det'n House Under 12"	Total No. Plants	No. required for 16 Sets	Remaining Plants after Filling 16 Sets
3	43476	Lamat	38	35	50		123	80	43
6	43560	Kanola	183	94	64		321	80	241
7	43602	Ishkal	26	25	39		90	80	10
12	44785	Pankay	15	10	60		85	80	5
15	44439	Nabal			73	8	81	80	1
17	44440	Nimlich	238	71	46		355	80	275
18	44625	Panchoy	130	58	60		248	80	168
21	44626	Benik	75	86	56		227	80	147
26	45560	Manik	45	70	34	27	176	80	96
27	44782	Cabnal	233	46	45	3	327	80	247
28	44783	Cantel	32	58	21		111	80	31
30	44856	Tertch	28	51	29		108	80	28
34	45562	Ishim	35	14	11	25	85	80	5

Thursday Washington D.C Feb 13 1919

Talked with Blake re the botany of the avocados.

Persea schiedeana — He says that the coyo' or chinini is a good species undoubtedly to be referred to Persea schiedeana. This name can safely be used for the species in the future. It differs from P americana in having staminodes which are not capitate, in the flowers having pedicels much longer than the perianth, and in the reddish pubescence of the young growth.

Persea americana — The specimens of the West Indian and Guatemalan races; with one exception, Trapp - Blake refers to Persea americana. He finds no botanical difference between these two races.

Trapp — The Trapp avocado, of which Blake has examined only one specimen, appears to him to be quite distinct. He believes it to represent a distinct species. This belief is based on the absence of pubescence in the foliage and flowers of Trapp. It is nearly glaberous. He desires more material of

this variety to determine whether this character is constant or not. I believe Trapp to be nothing more than a glabrous sport of P. americana.

Persea drymifolia — Blake still reserves judgment regarding the standing of the Mexican race. He says it is distinct from the typical Persea americana, but he is not certain whether these differences are great enough to give it specific standing as P. drymifolia, or whether it is a botanical variety, P. americana var. drymifolia.

Anay — The material of the anay is not sufficient to permit of a determination. Flowers should be obtained as soon as possible.

Monday Washington DC. Feb 17 1919

Notes on the behavior of the Guatemalan avocados in the Detention house:

No. 1. Not very strong grower. Rather straggling. Leaf rather broad.

No. 3. Fairly good grower. Rather straggling. Narrow leaf.

No. 4. Good strong grower: leaves broad.

No. 6. Fine strong grower. Short jointed. Leaves moderately broad.

No. 7. Very weak grower. Leaves long and slender. Does not look promising.

No. 8. Growths rather slender. Leaves very narrow and long. Does not look very strong.

No. 10. Fairly vigorous grower; rather slow to start. Fine habit, erect strong shoots, leaves large and rather broad, thick, dark green in color, handsome. Growths short and stocky.

No. 12. Rather spreading in habit. Fairly vigorous grower. Leaves elliptic-lanceolate.

No. 15. Stocky, strong growths. Leaves rather slender, handsome.

No. 17. Strong grower but straggling in habit. Leaves rather narrow.

No. 18. Strong erect grower, with good stout stems and leaves well placed. Leaves large, medium broad, thick, dark green, handsome.

No. 19. Very ragged grower - straggling. Makes long slender growths, weak and unable to stand erect. Leaves medium broad.

No. 20. Growths of good form, fairly stout erect. Leaves rather slender.

No 21. Good strong grower. Shoots stout & well jointed. Leaves deep green medium broad, thick.

No. 23. Fairly good habit. Growths strong, not quite straight. Foliage large, heavy leaves thinner and softer than some others.

No. 26. Very similar in habit to 23. Leaves broad. Growths rather slender.

No. 27. A trifle straggling but a strong grower. Leaf long and slender. Growths only moderately stout.

No. 28. Good grower, at times the growths a trifle weak. Eyes drop early in some cases. Leaves rather slender.

No. 25. Growths short and stocky. Leaves medium slender.

No 11. (Only 2 small plants in this house) Looks like it might not be a strong grower.

No. 30. Fairly strong grower. Not very erect. Leaves medium broad, rather drooping.

No. 32. Slender, weak growths. Leaves narrow.

No. 33. Fairly good grower. Stout and erect. Leaves large medium broad, handsome. Has no S.P.I number.

No. 34. Apparently spreading in habit. Short jointed. Good grower. Leaves rather slender.

No. 35. Looks like 34 in habit. Leaves rather slender. Good grower. Stems not stout.

No 36. Growths look rather weak. Leaves slender. Plants still very small.

Notes from Dr. Galloway re Florida:

Determine how many of the Guatemalans are growing at Miami, stocks on which budded etc, as follows:

My number ——
S.P.I. number ——
Quantity of plants —— new garden? old garden?
Stocks on which growing —— old or young trees?
Size or growth ——
General condition ——

Advise office at once of any numbers missing, so stock can be sent.

Brooksville. If possible visit garden middle of March to assist in planting the avocado collection.

The material sent to Brooksville is as follows:

SPI number	quantity
43476	15 plants
43560	"
44856	"
45561	"
44628	7 plants
44626	15 plants
45560	"
44625	"
44785	"
44782	"
43602	"
45562	"
45563	"
44783	"
44440	"

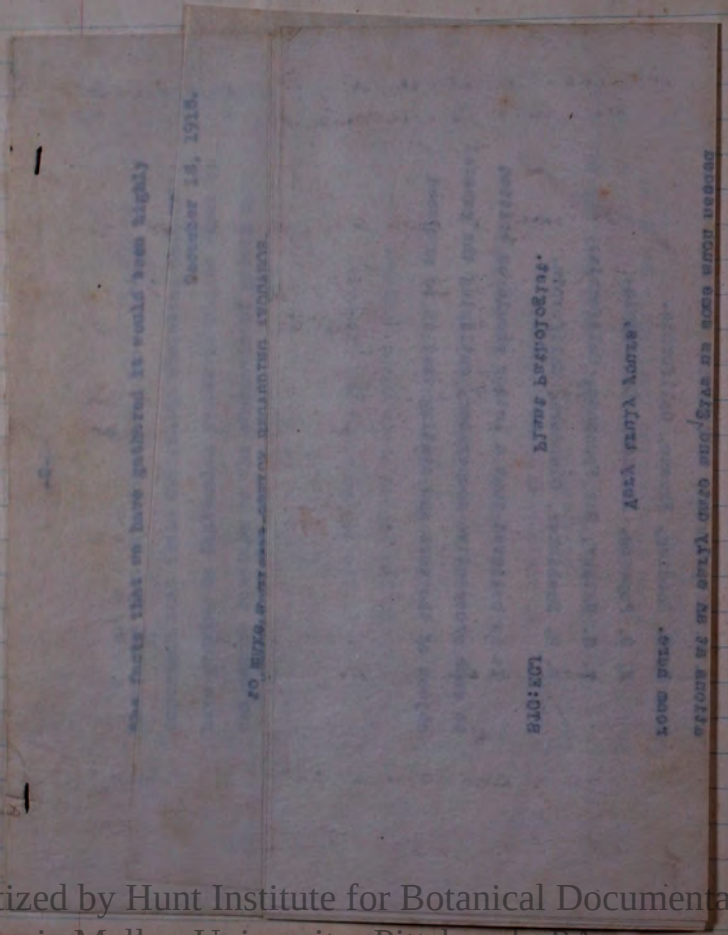
217 plants in all

Received at Brooksville Nov 2 1918, and potted into 7" pots and put in the greenhouse, where they have been kept all winter.

Look over conditions at new garden, Miami, to see if a set of Guatemalans 10 plants of each number (230 plants in all) can be planted. They should be 8x8 ft apart. If practicable, advise Ofs at once and material will be sent down at once.

Visit plot at Collins Beach which has been picked out for Hitchi experiments Near water tank.

Suggest plantation 8-10 acres of Bambusa tulda at Collins Beach, for tourist attraction & commercial bamboo. We have the plants for this spring. We have 8000. Takes about 600 plants to acre - 8x8 ft in clumps.



Tuesday. Rockville Md. Feb 18 1919

⊙ Look up Array at Miami. Material has been sent from Washington.

Following budded stock growing at Yarrow:

No. 6. 43560. 285 plants in 6", fairly good condition but pot bound.

No. 30. 44856. 85 plants in 5" pots, rather poor condition. Weak grower. Pot bound + roots thru into cinders

No 34. 45562. 9 plants. Fair shape. 5" pots. Need repotting

No. 17. 44440. 346 plants in 5" pots. Good grower. Needs repotting.

No. 18. 44625. 235 plants in 5" pots. Fairly good plants but pot bound.

No 19. 44628. 7 plants

December 18, 1918.

MEMORANDUM FOR OFFICE REGARDING AVOCADOS.

In our preliminary report on the field trip to Savannah, Georgia; Brooksville and Miami, Florida; and other points in the South, we pointed out some of the problems connected with the introduction of avocados, particularly the Popenoe Guatemalan collection.

We have on hand something over 2,000 plants of Popenoe's varieties in five or six-inch pots. About half of these plants are at Yarrow and the other half we hold in our detention houses on the Department grounds. Many of these plants are now nearly two years old and have been held here until they are beginning to deteriorate. Aside from the expense of caring for plants of this kind under glass, we badly need the space for other things, especially for the propagation of certain of Popenoe's varieties which as yet we have only in limited numbers.

There are twenty-three of the Popenoe varieties, of which we have thirteen in sufficient quantities to make a distribution for trial and testing. From

Tuesday. Rockville Md. Feb. 18 1919

at Miami, Material has
ashington.

stock growing at Yarrow:

285 plants in 6", fairly
pot bound.

85 plants in 5" pots.
tion Weak growers. Pot
them into cubes

plants Fair shape 5"
long

346 plants in 5" pots
de repotting.

235 plants in 5" pots.
s but pot bound.

7 plants

the facts that we have gathered it would seem highly important that these Guatemalan varieties that we have growing on Guatemalan stocks be placed where we can secure readings on the character of growth in this country. Popenoe himself points out the need for this and says:

> "Probably the most important point to be tested in connection with these varieties (Guatemalan) is the character of growth they will make in the United States. Most of the Guatemalan varieties which have been discarded in California during the past five years have had to be dropped because of some defect in habit of growth; the most common defect has been a tendency on the part of the young budded trees of the several varieties to die during the first or second year without any apparent cause."

Our idea is that we should immediately take steps to put out plantings of these varieties in a sufficient number of points in Florida and California to enable us to get readings on reaction to soil and climate, vigor, fruiting habits, resistance to disease, and other characters which will be a safe and intelligent guide in making further distribution and in establishing the avocado industry. We find that we have sufficient plants on hand to enable us to make up sixteen sets of five plants each of thirteen of Popenoe's varieties. This leaves ten of the varieties still to be propagated and handled.

16

Tuesday, Rockville, Md. Dec 16 1919

17

at Miami, Material has
arrived.

stock growing at Yuma:
285 plants in 6" pots
potbound.
95 plants in 5" pots,
from seed grown Oct
from cuttings
plants from chips 5"
pots
346 plants in 5" pots
the splitting.
235 plants in 5" pots,
not potbound.
7 plants

We suggest that we endeavor to place eight of these sets in Florida and eight in California, keeping in mind constantly that they are trial sets and that the object of placing them is to obtain readings on reaction to soil, climate, etc.

The following table sets forth the data in regard to the avocados on hand for distribution. There is given first Popenoe's number, then the S. P. I. number, Popenoe's variety name, the number of plants at Yarrow, the number we have here in the detention houses, the total number of plants, the number required for the sixteen sets, and the remaining plants after filling the sixteen sets.

Tuesday. Rockville Md. Feb. 18 1919

at Miami. Material has
ashington.

stock growing at Yarrow:

285 plants in 6", fairly
pot bound.

85 plants in 5" pots,
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them into cubes

plants Fair shape 5"
ting

346 plants in 5" pots.
ds repotting.

235 plants in 5" pots.
s but pot bound.

7 plants

GUATEMALAN AVOCADO COLLECTION - BUDDED PLANTS

(Five plants each of the following listed varieties to be sent to sixteen cooperators.)

Popenoe's No.	S.P.I. No.	Variety	Plants at Yarrow		Plants in Det'n House		Total No. Plants	No. required for 16 Sets	Remaining Plants after Filling 16 Sets
			12" or more:	Under 12":	12" or more:	Under 12"			
3	43476	Lamat	38	35	50		123	80	43
6	43560	Kanola	183	94	64		321	80	241
7	43602	Ishkal	26	25	39		90	80	10
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28	44783	Cantel	32	58	21		111	80	31
30	44856	Tertoh	28	51	29		108	80	28
34	45562	Ishim	35	14	11	25	85	80	5

Tuesday, Rockville, Md. Dec 16 1919

at Miami, Material Res
ashington.

stock growing at Yarrow:
285 plants in 6" pots, ready
pot bound.
95 plants in 5" pots,
ten weeks growth, ready
ten into cubes
plants from cubes 5"
ting
346 plants in 5" pots
the planting.
235 plants in 5" pots,
5 not pot bound.
7 plants

In order to get as wide readings as practicable, we suggest the following localities for the placing of the sets:

A. Florida.

1. Brooksville - Plant Introduction Station. This set has already been provided for.
2. Dunedin or vicinity.
3. Avon Park.
4. Some point north and near Lake Okeechobee.
5. Region about Florence Villa, either at Florence Villa or Winterhaven.
6. Miami - Plant Introduction Station.
7. Homestead, or south of Homestead. Preferably with Mr. Waldon at Homestead.
8. One of the frostless keys near Miami, preferably Collins' place.
9. Fort Myers section, or preferably the section west of Fort Myers in or around Bokeelia.

B. California.

1 and 2. Riverside, preferably Mr. E. A. Chase and Dr. H. J. Webber.
3. The region in Orange County near Tustin or vicinity.
4. The region about Pasadena.
5. The region about San Bernardino.
6. The region about Oroville.
7. The region about Glendora.
8. The region about Santa Barbara.
9. The region about San Fernando.

16

Tuesday, Rockville, Md. Oct 16 1917

at Miami, Material has arrived.

stock growing at Yarrow:
285 plants in 6" pots, fairly pot bound.
95 plants in 5" pots, Ten Week grown, Pot bound into cubes
plants Ten days 5" long
346 plants in 5" pots like shipping.
235 plants in 5" pots, Pot bound
7 plants

17

The following names of probable growers in Florida and California are submitted merely as a suggestion. The names of better growers may already be on file in the office, but the matter of men should be very carefully looked into.

W. F. Miller, Citizens Bank Building, Tampa, Florida.
Mr. Inman, Florence Villa, Florida.
C. S. Donaldson, Avon Park, Florida.
John Kemble, Avon Park, Florida.
Mr. Waldon, Homestead, Florida.
L. B. Skinner, Dunedin, Florida.
Plant Introduction Field Station, Miami, Florida.

E. A. Chase, Riverside, California.
W. H. Saltman, San Diego, California.
C. F. Utt, Tustin, California.
G. C. Roeding, Fresno, California.
F. O. Popenoe, Altadena, California.
T. G. Walker, San Fernando, California.
F. H. Nusbicker, Glendora, California.

It is believed that a letter should be written to each prospective cooperator, outlining the general object of the work and stating that it is proposed

Tuesday Rockville Md. Feb 18 1919

at Miami, Material has
Washington.

stock growing at Yarrow:

285 plants in 6", fairly
pot bound.

85 plants in 5" pots,
tion Weak growers. Pot
them into cubes

plants Fair shape. 5"
ting

346 plants in 5" pots
eds repotting.

235 plants in 5" pots,
to but pot bound.

7 plants

to send the plants for experimental purposes to obtain readings on the reaction of the plants to soil and climate, vigor, fruiting habits, resistance to disease, etc.; that the plants are not to be used for propagation purposes until the tests are completed, and then by mutual agreement between the grower and the office; finally, that the test plantings will be examined and studied from time to time by experts from the office, and that any information which may be helpful to the grower, secured through these studies, will be gladly furnished. The acceptance of the plants under the conditions above stated would seem to be all the agreement necessary. It is important that action be taken on this matter as early as practicable, in order that plants may be shipped to their destinations at an early date and thus give us some much needed room here.

Very truly yours,

BTC:ECJ

Plant Pathologist.

16

Tuesday, Rockville, Md. Jly 16 1919

17

at Miami, Material has
arrived.

stock growing at Jarvis:
285 plants in 6" pots
pot bound.
85 plants in 5" pots
Two Week growth. Ready
for use to order

Plants Four days 5"
long
346 plants in 5" pots
ale shooting.
235 plants in 5" pots.
5 not pot bound.
7 plants

No 21. 44626. 167 plants in 5" pots. Weak grower. Plants rather poor and in need of repotting.

No. 27. 44782. 245 plants in 5" pots. Strong grower. Plants in fair condition

No. 3. 43476. 64 plants in 8" pots recently repotted. Good.

No. 35. 45563. 15 plants mostly in 7" pots. Rather poor

No. 7. 43602. 41 plants in 8" pots. Poor grower.

No 12. 44780. 5 plants in 8".

No 36. 45560. 143 plants in 5" pots. Good plants but need repotting

No. 28. 44783. 61 plants in 5" pots. fair.

No. 33. 45561. 133 plants in 5" pots. good condition.

Seedlings for budding stocks

131 in 8" pots, cut back, sprouts 6-12" high
56 ditto
251 in 5" pots. cut back sprouts 4-12" high many not very vigorous.
56 in 6" pots not cut back, 12-20" high rather old + dry, defoliated, poor condition

1475 miscellaneous

1568 miscellaneous
3537 Total in one house.

1128 not cut back, in other house

14994. Chamaedorea sp. Small lot of pacayitos. In fine condition, making good growth. I believe there are 2 species in the lot.

Monday Miami, Florida Feb. 24 1919

Annona diversifolia. A quantity of the seed. Sent us from Tapachula (14781) has been planted in flats in the greenhouse and is now germinating.

This plant is of great interest for two reasons. In order to obtain some choice varieties suitable for asexual propagation, I suggest that we plant about 100 seedlings of this lot in a test orchard at the new garden. They could be set as close as 5 x 5 feet, and would not require a large piece of ground. From this 100 seedlings we should obtain some prolific and otherwise desirable varieties. If they are scattered from South Florida it will be hard to run them down later on and find the best ones for propagation.

14337. Persea americana. Originally grown under S.P.I. 19094. Description as follows in Inventory:

From Key Largo, Florida. Received from Mr. Edward Gottfried, August 13, 1906.

Seeds of a type of avocado described as follows:

'Shape ovoid to roundish, obliquity marked. Seed medium, fitting very tightly in cavity and having a closely adherent seed coat which does not remain attached to cavity walls upon removal of seed. Flesh comparatively thick, practically fiberless, relatively large proportion of 'green'. Flavor medium to good. Skin more granular than leathery, thickish, separating readily from pulp. Name suggested for this variety 'Gottfried'.—

Barrett.

The tree in the garden is 30'-35' feet high. I saw fruit upon it several years ago, but at that time it was not bearing good crops. Simmonds says last year it produced 250 fruits. It now takes on considerable interest therefore, and should be carefully observed this season.

The Gottfried has the appearance of a Mexican avocado. The foliage is lance-pointed, though rather [illegible]

The fruit is about a pound in weight, and as I remember it, was of good quality. It ripens here in late summer, commencing in August, and continues until October.

Steffani says both buds and seedlings of this variety are characterised by unusual vigor. In the freeze the old trees suffered no injury, according to Simmonds.

Wednesday Miami, Fla. Feb 26 1919

Mr Simmonds and I went over the Guatemalan avocado material in old garden.

Stock nursery, South garden, west of walk. All West Indian roots, about 2½ yrs old

44783. 28. 5 plants. W.I. root. 12 to 24 ins. Not doing well. Growth yellow.

44681. 25. 5 plants. Growth about 3 ft Vigorous, doing well

44626. 21. 8 plants. Growth 3 to 5 ft. Vigorous, good growth. Leaves do not burn. Possibly making bloom buds?

45560. #26. 2 plants. Growth 4 to 6 ft. Vigorous, excellent growth.

44440. 17. 1 pl. Growth 3 ft. Vigorous

44782. 27. 5 pls. Growth 12 to 24 ins Fair growth. Rather yellow. Bloom coming?

44626. 21. 1 pl Growth 1 ft, weak.

44627. 20. 4 pls. Growth 18 to 24 ins. Fairly vigorous one plant good. One plant perhaps not of this number.

45560. 26. 1 pl. Growth 2 ft. Fair, strong.

44440 17. 5 pls. Growth 2 to 4 ft. Straggling, little foliage, but fairly strong.

44680. 23. 1 pl 24 ins. Fairly strong

44625. 18. 2 pls. 3 ft. Rather yellow, ragged

43602. 7. 1 pl 3 ft. Good vigorous plant.

44628. 19. 1 pl 12 ins weak.

43932. 8. 1 pl 18 ins Very poor, yellow.

44439 15. 2 pls 3 to 4 ft. Vigorous, strong.

44782. 27. 3 pls 1 to 2 ft. Fairly strong, coming into bloom.

44856. 30. 2 pls 2 to 3 ft. Fairly strong grower.

45560. 26. 1 pl 6 ft. Stury, healthy

44856. 30. 1 pl 3 ft. Fair.

43476. 3. 1 pl 3 ft. Fair, rather ragged

44856. 17. 1 pl 8 in, fair but small.

45562. 28. Seedlings just starting.

44785. 12. 1 pl 2 ft, rather weak

44856. 30. 1 pl 1 ft. Rather weak, coming thru loam

43560. 6. 2 pls 1-2 ft. Weak, ragged

43602. 7. 2 pls 2 ft, and 5 ft. Good grower, lvs somewhat burnt.

45360. 26. 2 pls 4 ft Strong. lvs

44856. 30. 5 pls. 6 ins to 2 ft. Poor.

43934. 10. 1 pl 2 ft. Very weak

43476. 3. 6 pls. 2 to 4 ft. Good. Lvs somewhat burned.

45561. 33. 1 pl 5 ft. Very strong.

All of the above plants are on miscellaneous West Indian stocks of local origin.

South Garden, east of walk:

H5563. 35. 1 pl. On W I seedling, 2" caliper. 1 buds 3 ft above ground. Just starting out.

H5562. 34. 1 pl. on W I seedling 2½" caliper. 1 bud 4" long.

H5560. 36. 1 pl. On W.I seedling 2" cal. up. Budded 3½ ft from ground. Bud 6 ft high, very strong & vigorous. Foliage good.

H5560. 96. 1 pl. On W I seedling 2" caliper. Budded 3 ft per ground. Bud 5 ft high, very strong.

H3476. 3. 1 pl. On W. I. seedling tree. 5 in caliper. Budded on main trunk 4 ft above ground; bud 6 ft high, vigorous, good color.

Block east of bath house:

H3486. 4. 1 plant. On W I seedling. Budded near root of tree where trunk is 8" in diam. Bud 15 ft high 4" thick at base, outgrowing the stock. Vigorous and healthy. Carrying one fruit probably mature. Budded May 31. 1917.

H5561. 33. 1 pl. On W I seedling. Budded on sprout 3 in thick, 5 ft above ground. Bud 6 ft high, erect, vigorous.

F H B 1905 3. Seedling from Guatemala Tree, on W I, now 15 ft high and coming into bloom.

Cooks Guatemalan Avocados:

We have the following of Cook's material growing in the old garden:

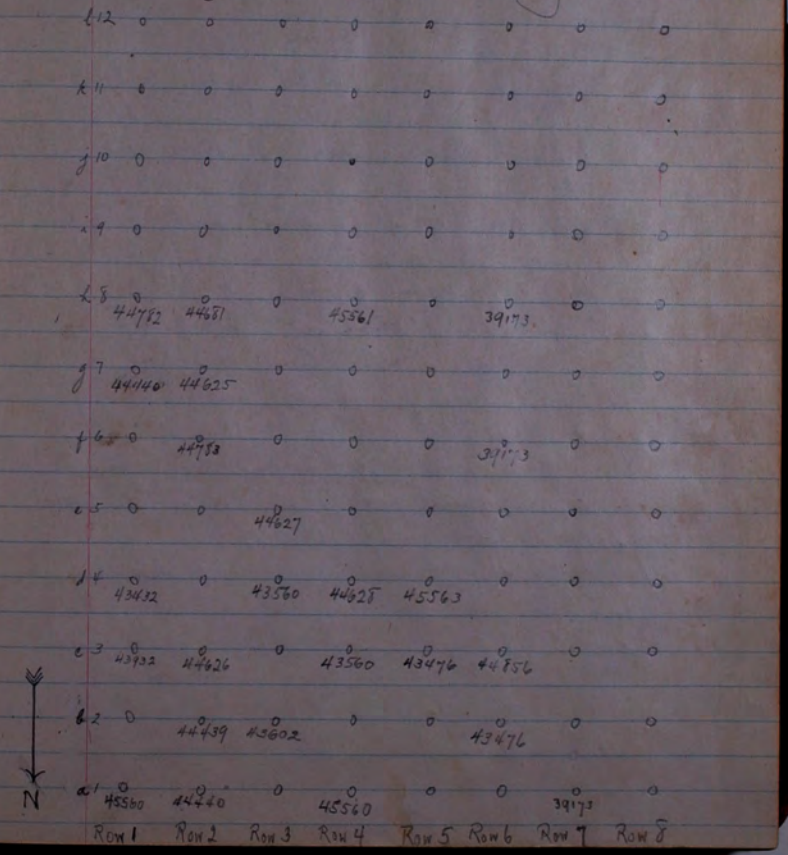
38549. Purdue variety from Antigua. Has flowered profusely several times but has only borne one fruit. Simmonds thinks the variety is not adapted to this region.

38560. Seedling from fruit obtained in Guatemala City market. The tree is growing very well. Not yet fruiting

38562. Seedling from fruit obtained in Guatemala City market. Tree growing well, flowered last yr but no fruit produced yet.

Thursday Miami, Fla. Feb 27 1919

List of avocados in new garden:



Row 1, tree 1. Small bud 45560 (26) on stock plant 6 ft high

tree 2. Stock plant 6 ft high, trunk 3" diam

tree 3. Two buds 1" long, 43932 (8) on stock plant 5 ft high, trunk 3" diam

tree 4. Seedling cozió. 43432. 24" high.

tree 5. Stock plant 3 ft high, trunk 1½" diam

tree 6. Dead

tree 7. 44440, (17) budded near ground, tree 4 ft high, fairly vigorous.

Tree 8. 44782 (27) budded at 1 ft from ground, 4 ft high. bud outgrowing stock badly.

Row 2, tree 8. 44681 (25) 1 bud 4" long on stock plant 5 ft high, trunk 3" diam

tree 7. 44625 (18) Tree 7 ft high, vigorous, doing well. Coming into bloom

tree 6. 44783. (28) Tree 3 ft high budded on stock at ground. Not healthy.

tree 5. Stock plant 3 ft high

tree 4. Stock plant 5 ft high, trunk 2" diam

tree 3. 44626. (21) Tree 5 ft high, fairly vigorous, color of foliage not good.

tree 2. 44439. (15) Bud 3" long on stock plant 5 ft high. Trunk 2" diam.

tree 1. 44440 (14) Tree 5 ft high. Sticky, fairly healthy in appearance.

Row 3, tree 1. Stock plant 8 ft high, trunk 4" diam

tree 2. 43602 (7) Tree 5 ft high, rather slender, poor color.

tree 3. Stock plant 6 ft, trunk 3" diam

tree 4. 43560 (6). Bud 2½ ft high, appears to be dying.

tree 5. 44627 (20) Bud just starting on stock plant 5 ft high, trunk 2" diam

tree 6. Stock plant 5 ft, trunk 2" diam

tree 7. Stock plant, seedling from 46 [illegible].

tree 8. stock plant, seedling from 46337.

tree 9. seedling 38561

Row 4 tree 8. 45561 (33) Tree 5 ft high, vigorous, good color, coming into bloom.

Tree 7. stock plant 8 ft. trunk 3" diam

Tree 6. Stock plant. 10 ft. trunk 5" diam

Tree 5. stock plant 5 ft. trunk 3" diam

tree 4. 44625. (19) tree 3 ft high, bushy, in bloom. Fairly vigorous.

tree 3. 43560 (6) Tree 2 ft high. sickly, weak.

tree 2. West Indian seedling stock plant.

tree 1. 43562. (26) Tree 8 ft high vigorous, good color.

Row 5. Tree 1. Stock plant 4 ft, trunk 2" diam

tree 2. West Indian seedling stock plant.

tree 3. 43476 (3) Tree 3 ft high spreading in habit fairly strong, coming into bloom.

tree 4. 45563 (35) Two buds just starting on stock plant 6 ft, trunk 3" diam

tree 5. Stock plant 6 ft, trunk 3" diam

tree 6. Stock plant 6 ft. trunk 4" diam

tree 7. Stock plant, 6 ft, trunk 4" diam

tree 8. Stock plant, 6 ft, trunk 4" diam

Row 6. Tree 8. SPI 39173. seedling

tree 7. Trapp seedling stock plant, 5 ft high. Trunk 2" diam.

tree 6. SPI 39173 seedling

tree 5. West Indian seedling stock plant. 5 ft high. Trunk 1½" diam.

tree 4. Stock plant 6 ft, trunk 2" diam

tree 3. 44856. (20) Bud 12" long, weak, on stock plant 5 ft. trunk 1½" diam

tree 2. 43476 (3) Tree 3 ft high, bushy, fairly vigorous. coming into bloom.

tree 1. stock plant 5 ft. trunk 2" diam

Row 7. Tree 1. SPI 39173 seedling

tree 2. West Indian seedling stock plant, 3½ ft high, trunk 1" diam

tree 3 Dead

tree 4. SPI 39173 seedling

tree 5. SPI 39173? perhaps Taylor seedling?

tree 6. Guatemalan seedling of unknown origin, 1 ft high, weak.

tree 7. West Indian seedling stock plant, 2½ ft high.

tree 8. West Indian seedling stock plant, 5 ft high, trunk ½ ins diam.

tree 9. Fuerte seedling 5 ft high.

tree 10. West Indian seedling stock plant, 5 ft high

tree 11. Fuerte seedling, 5 ft high, bushy.

tree 12. Seedling of unknown origin came from Washington. 1 ft high. Seed recd August 31, 1916.

Row 8, tree 12. 36604 Seedling for stock (?) 6 ft high, trunk 2½ diam.

tree 11. Seedling from Queretaro variety, 4½ ft high, trunk 1½" thick

tree 10. Seedling from Queretaro variety, 3 ft high, yellow foliage.

tree 9. Guatemalan seedling of unknown origin, obtained from Coolbaugh, probably Fuerte in Calif. 4 ft high.

tree 8. Same as tree 12, Row 7.

tree 7. Seedling from 26710 (Taylor) 8 ft high, trunk 3" thick

tree 6. same as tree 7 this row, 7 ft high.

tree 5. same, 6 ft high

tree 4. same, 6 ft high

tree 3. same, 6 ft high

tree 2. same, 5 ft high

tree 1. same 6 ft high

All stock plants in above area, when not otherwise indicated, are seedlings of Collins. 1908.

After finishing the census of the avocados in the new garden, Mr Simmonds and I called on George B Cellon.

Cellon is now a firm believer in the Guatemalan avocados. The variety in which he feels most confidence at present is Solano. He has found that Solano is a vigorous grower, making a strong shapely tree, and that it produces its large fruits abundantly. He admits that the quality of the fruit is not very good, but believes it good enough to meet the demands of the market. He says it is a question similar to that of mango culture, whether one should grow Mulgobas, which are of the finest quality but yield poorly, or Hadens which are of fair quality and set the grower a handsome return. Until other varieties have been tested, he intends to recommend and grow Solano.

Cellon has recently sold 700 Twenty trees to Gillette of Winter Haven.

Gillette is going to plant them in orchard form near Winter Haven.

Cellon is much pleased with Fuerte but believes it will be more valuable for the northern edge of the avocado belt than for his section. He says the objections to it here are (1) a tendency to develop decayed spots on the surface when the fruit is mature, (2) inducement to picking and early opening season the fruit not remaining on the tree here thru the winter months.

The Guatemalan sorts, Cellon says will succeed here with much less fertilizer than the Trapp.

Solano is the only variety Cellon is now recommending for extensive commercial planting. He says that Verde he fruited with him once and was of fine quality, and he thinks it may prove to be a valuable variety. Dr. Solano is [illegible]

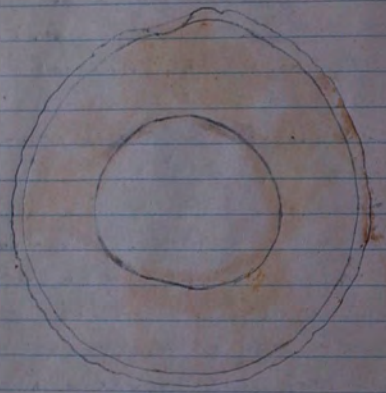
bear well. Knight is making fine growth, and he is propagating a good many trees. It has not yet fruited.

Of my introductions, the following three are the most promising (as far as growth is concerned) of the ten or eleven which he now has on trial: Lanat (3), Panchoy (15), Nimbal (17). Of these Panchoy is the strongest grower. Its flavor is remarkable.

Cellon has one tree of Cloverly's "Two pound green". This I believe to be an introduction from Atlixco. It should be investigated in connection with the paper I intend to prepare on the avocados introduced from Atlixco into the U. S.

Friday Miami, Florida Feb 28 1914

Below is a description of the Colorado avocado, taken from a specimen produced in the Plant Introduction Garden:



Form spherical, slightly oblique at base, weight 8 ozs. Base rounded to obscurely pointed, apex rounded, surface rough & warty toward base, deep maroon purple in color, maroon in places, dots few, small, pale maroon; skin 2 to 3 mm thick, brown, woody, and coarse, separating freely from flesh

cream color, faintly tinged greenish near the skin, mushy, rather dry in texture, the flavor not very rich, but fairly pleasant; quality fair; seed rather small, oblate in form, light in the cavity with both seed coats adhering closely to the smooth cotyledons.

Simmonds says this variety is no good.

It is a typical Guatemalan, having as thick and woody a skin as is commonly found in this race.

In season it appears to be rather late, since some of the Guatemalans do not remain on the tree as late as this.

Date Palms

Mr Mathison of Coconut Grove has told Dr Fairchild of his desiring date palms and the latter desires to investigate the possibility of producing dates in this region for home use if not commercially.

We visited this afternoon the property of Mr Ihle above Little River. Growing alongside the Dixie Highway on a number of date palms 30 years old. Ihle raised them from seeds taken from dates (dried) which he bought in the market. Probably they were Halawi or Tard, and as he says they were dark colored they most likely were Tard. Two of the palms are pistillate and have been bearing well although Ihle has never pollenated the flowers. There are several male palms close by. Ihle says the dates grow to large size but never become soft. He thinks if he understood how to process them they would be eatable.

At the Charles Deering place on [illegible] Bay [illegible] there

are 5 palms about 5 years old. Several of them are now coming into bloom. All of them which are far enough advanced to show the sex of the flowers are males. These palms are in excellent condition.

Mr Mathison's palm should be examined to determine if it is the true Phoenix dactylifera. It may be something else. I ate dates from it one summer and as I recall them they were mealy, with rather dry flesh.

I very much doubt if it will be possible to produce good dates in this region, even for use in the fresh (cut ab) state. It appears to me that the humidity is too great and the summer temperatures are not high enough.

Doryalis gardneri

On the Charles Deering property are a number of large plants of the Ceylon gooseberry, Doryalis gardneri. There are four of them in fruiting, nearly the rest producing nothing. I think the distribution of the sexes may be irregular in this species as it is in D. caffra, or else it is regularly monoecious, and the plants which are not fruiting are males.

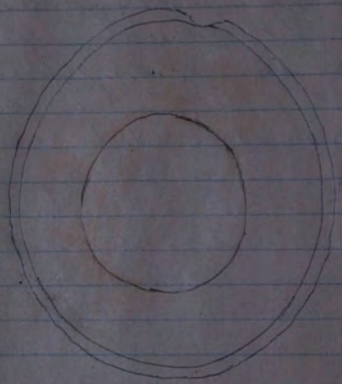
This fruit is strikingly suggestive of an English gooseberry. It is spherical to slightly oblate in form, an inch in diameter or more normally somewhat less, dull purple in color with green dots, the surface velvety. The sepal green calyx persist pressed at the base of the fruit around the stem. The skin is thin and rather tough. The pulp is soft and juicy, like that of a gooseberry, the flavor distinctly like that of the latter fruit when not fully ripe. It is decidedly acid, but when ripe it

is sufficiently sweet for the fruit to be eaten out of hand. The pulp is purplish red in color and stains like the blackberry. The seeds are several, about the size of apple seeds or somewhat smaller, straw colored. Season February to April probably.

The plant seems to have value and I believe it is worthy of cultivation in gardens generally. At present it is not common in this region. Nothing has been done as yet to work out methods of utilizing the fruit but I believe it would lend itself readily to stewing and to jelly making. The bearing plants (presumably pistillate) simply load themselves with fruit. Asexual propagation should be used to produce bearing plants. But first of all it should be determined whether the latter are hermaphrodite or pistillate, so as to know whether it will be necessary to plant males along with the bearing plants or not.

The Collas avocado, SPI 17058
From parent tree in Plant Introduction Garden.

Collas Avocado



Fruit roundish ovate, weight 7 ozs; base rounded, the stem inserted slightly obliquely; apex rounded; surface undulating, roughened toward the stem; moss green often grayish yellow near base (white at point to suture), dots very few; skin 2 to 3 mm thick, hard, woody, coarsely granular throughout; flesh rich cream yellow near seed, pale green next skin, clean, rather dry, flavor moderately rich, sometimes strong and slightly bitter (perhaps when fruit is left on tree too long?)

quality fair; seed small to medium in size, tight in the cavity, with both seed coats adhering closely to the smooth cotyledons. Season January to March at Miami Garden.

Eucalyptus tesselatus —
tesselated scale found on Dimocarpus longan, in Royal Palm grounds, Miami.

Saturday Miami, Fla. March 1 1919

Collins avocado grove includes 7000 trees, of which 800 are mangos.
Return from grove in 1918 was $19,000.

Deering grove produced 2300 crates of avocados in 1918. Gross return in 1918 was $18000. This was off of 5 acre grove. Avg price was $6 per crate highest $20.

⊙ Put Fuerte at Brooksville

Monday Homestead, Fla. March 3 1919
Went to Homestead with Dr Fairchild & Prof. Norton.

Dorn marketed last yr the crop of Trapp from a grove near Larkin (property of W. H. Sutherland). There were 500 bozen pints, and the net return was $1500.

⊙ Dorn wants some Guatemalans.

Coral Reef Nurseries

Taft doing well. Will also come into bearing.

Meserve being dropped

Fuerte is a mean variety from the nursery man's standpoint; very susceptible to insects and diseases

Taft. Taylor. Wagner and Alligex are the four varieties now prefered by these people. Perfecto also recommended but must be sprayed frequently to keep down diseases.

Linda growing well here

Grande is a Christmas-January fruit and looks promising

Wagner Dec - Feb.

Taylor February ripening

Collins, Calla and Winslow are the 3 latest varieties. Winslow considered superior, Collins & Calla about equal in quality.

Winslow dying in nursery as when young. Like Dickey did in California.

Budding done in Nov, Dec and Jan. After Jan bark on flowering & budwood is difficult to obtain. New growth hardened up and ready for budding in Aug. Dormant buds in Feb preferable.

Fuerte is only budded variety which is

susceptible to avocado scab in high degree. Lots of seedlings attacked by it.

Budded trees field grown then dug and boxed, and kept in box 2 to 3 months before selling.

At W. J. Krome's grove

Taft bearing at 3½ yrs old (budded in old stock). Mr Krome is going to plant 4 acres to this variety.

Perfecto bears heavily here but fruit of medium quality and ripens Oct-Nov.

Beach of West Palm Beach has cut out Winslow as Taylor.

Perfecto is probably the hardest of the Guatemalans tested here, having stood the cold as well as Fuerte

Taft and Taylor two varieties preferred at present by Mr Krome Wagner also promising.

Taylor is a seedling either of Challenge or Royal, probably the former.

Wagner averages 19 or 20 ozs in weight. Largest 24 ozs at Calif. Says seed to be not more than 10 yrs. Can be kept on tree until March. Main season Jan and Feb.

Alfaro ripens here Jan - Feb. Mr Krome considers it one of the most promising Guatemalans. Says 21 to 26 ozs.

Solano ripens here in November with its greatest defect. Good for Winter Haven region.

McDonald has not yet fruited here, but growing well.

Nutmeg makes poor growth here.

Northrup fruits twice a year here.

⊙ Mr Krome wants budwood of all Guat. collection available as soon as ready, to put on sprouts from old W. I. Stumps. Ask Simmonds & advise him as soon as budwood is ready for cutting.

Wagner has a rather large seed. The flesh is cream color, of fairly rich flavor. I would not rate it a first class fruit.

⊙ 15 Guatemalans
Albert I. Swing
Coconut grove

⊙ Miami Beach Improvement Co
Miami, Florida

100 Guatemalan seedlings
Persea drymifolia
Persea americana

Mr. C. G. Fisher
Miami Beach Fla

Guatemalan seedlings
Persea drymifolia
Persea americana

H. W. Hasenmann
Larkin, Fla.
were him of shipment, Coconut Grove.
900 Guatemalan seedlings.

Tuesday Homestead, Fla. March 11 1919

Coral Reef Nurseries have the following

44856
44626
43476
43602
44625
44783
44782
44440

} one small box of each.

Mr Whitley would like buds of all other varieties between now and May. Let him know when it is ready and he will go to Miami and get it.

Ganter is badly diseased here

Whitley says he is more successful in budding mangos than avocados.

Fuerte seedlings almost never have any anise scent. Apparently they are reverting to the Guatemalan nature in the F_2 generation.

Avocado trees planted 20x25 ft here in grove.

South American goat manure is best thing to use when planting young trees.

Send Guatemalan bulletin to
R. M. Whitley
Miami (RFD A 226) Fla.

Notes at Mr Kromis place.
El Oro and Masorne are as tender as the average West Indian, tho not quite so tender as Trapp.

Guatemalans ripen from 2-3 months earlier than in Calif

Jan & Feb is the best season for selling avocados now.

Taft & Alfisco two best fruits in quality

Haden mango with about less fruit here last yr than Mulgoba.

Windsor avocados have remained on tree until July. Solano & Perfecto commence to ripen in October.

Family ripens in July. End of this month is beginning of West Indian season.

(O) A very early West Indian variety is greatly needed here.

Visited G. A. Walden
Mr D A Walden blasted holes 30" deep for the Guatemalan collection. Mixed marl & muck and put in the holes. with some red soil in bottoms of holes.
Ground is very rocky; almost no soil on it. What there is of soil is red brown in color.

Parent Walden tree 8 yrs old. Cut 4000 buds for this fall season + 3000 previous season. Fruit in Dec and Jan. Packs 30 to the tomato crate. Is quality better than Traff. Seed smaller than that of Traff and quite tight in cavity.
Walden is a seedling from a tree formerly on the property of a man named Troop, who lived near here. Walden got 12 plants from the tree in December. Most of the 12 seedlings have produced fruit of ordinary season. The Walden + 1 other are late. All 12 seedlings produce green fruits of about the same size.

Grapefruit grove is in excellent condition. Appears to be well cared for. Avocado trees here appear to be doing very well.

Thursday Miami, Fla Mar 13 1919

Three choice ornamental trees for this region, in my opinion, are the following

Terminalia Sagrana
Ficus religiosa
Ficus sycamorus

⊙ I believe the Loquat should be more extensively planted in certain parts of South Florida. But we ought to have the best varieties obtainable. Budwood should be obtained from California of Tanaka, Thales and the best Oliver-Tanaka hybrids which are growing at Vista.

⊙ In my paper on Atlixco it would be well to include a classification of the Atlixco varieties introduced into the U.S. showing Puebla as a Mep and Fuerte as a hybrid, so as to establish the standing of these varieties as well as the others, upon the correct basis.

Manga da Rosa is fruiting at the Garden this year for the first time.

Fuerte is blooming heavily, what sort of a crop does it promise here.

Guatemalan accessor for Da Fahnestock

Lamat
Kanola — Ship by express to Gomez
Pankay — Fla. and advise Dr.
Nabal — Fahnestock, 15 Seabreeze Ave
Nimbuk — Poinciana Park, Palm Beach.
Pancheg
Benuk
Manik — Also 2 Gottfried
Cabral
Cantil — 2 Guatemalan seedlings
Terlok

√ Da Fahnestock wants
Chamaedorea pacayito
Bonanist beans

Friday Palm Beach, Fla. Mar 14 1919

E. S. Baldwin
X √ 313 Lakeview Ave, West Palm Beach
1 Guatemalan budded variety — Pancheg

Mrs D C Berry
West Palm Beach Box 682
Ornamentals.

√ H. D. Berry
West Palm Beach P.O. 682
50 guatemalan seedlings c/f c2

√ John B. Beach
West Palm Beach
50 Guatemalan seedlings c/f c2

R. Whyte
Fort Pierce, Fla.
√ X Set of 5 Guatemalan varieties, 2 budded trees of each. Express collect to Ft. Pierce. Is 5 m west of Ft Pierce on heavy land. Has orange grove.

✓ D. H. Conkling
West Palm Beach, Fla.

✓ Geo. O. Butler
West Palm Beach, Fla.

Above two want Guatemalan seedlings, perhaps 20 trees each.

D. W. Boydston
Lake Worth, Fla.
25 Guatemalan seedlings, ~~express~~ col.
Ornamental plants for facial
Pacaytas. Sour sop. Matthaus sapodilla

✓ J. W. Means
Lake Worth, Fla.
25 Guatemalan seedlings, express col.

Saturday West Palm Beach, Fla. Mar 15 1919

⊙ Sent Mozmotte specimens of scale insect from avocado tree on E. L. Baldwin place. Determination desired.

~~D. W. Boydston~~
~~Lake Worth~~ (tomorrow 7:30 am)

✓ J. R. Poland
West Palm Beach
25 seedling Guatemalan to plant at Pahokee, ~~via~~ Lake Okeechobee ~~express~~

✓ F. W. Sadler
Box 866, West Palm Beach
25 Guatemalan seedlings express
Wants 10,000 Guatemalan seeds next fall.

✓ Charles Myers
Hypoluxo, Fla
10 Guatemalan seedlings ~~exp~~.

✓ Charles Edwards
West Palm Beach.
25 Guatemalan seedlings for planting at Pahokee. express

L. N. Simon
627 Fern St. West Palm Beach
25 Guatemalan seedlings to be planted at Canal Point on Lake Okeechobee.
Trees by express to W.P.B.

P. C. Chillingworth
50 Guatemalan seedlings to be sent to Stuart, Palm Beach Co. Fla. by express collect care P.C. Chillingworth West Palm Beach, Fla.

John H. Grant
Hobe Sound, Fla.
6 Guatemalan seedlings by express.

H. O. Ward
814 Isabella St. West Palm Beach
10 Guat seedlings. express

F. C. Belden
620 Fern St. West Palm Beach
Chamadorea sp. "Paraguito"
Bonavist bean seed.

A. E. Zimmerman
Box 74 Lake Worth Fla
Guat seedlings perhaps 10?

H. T. Grant
410 Gardenia St
W. R. Moore Box 910
West Palm Beach
Bonavist beans

G. E. Shappell
Port Lobale, Palm Beach Co. Fla
3 guatemalan seedlings by mail and list for fruits of interest to China, also ornamentals. April 15th. Guavas. Papayas Yams.

Tuesday Moore Haven, Fla. March 18 1919

A. O. Dayton
Moore Haven
O. M. Baker
Moore Haven

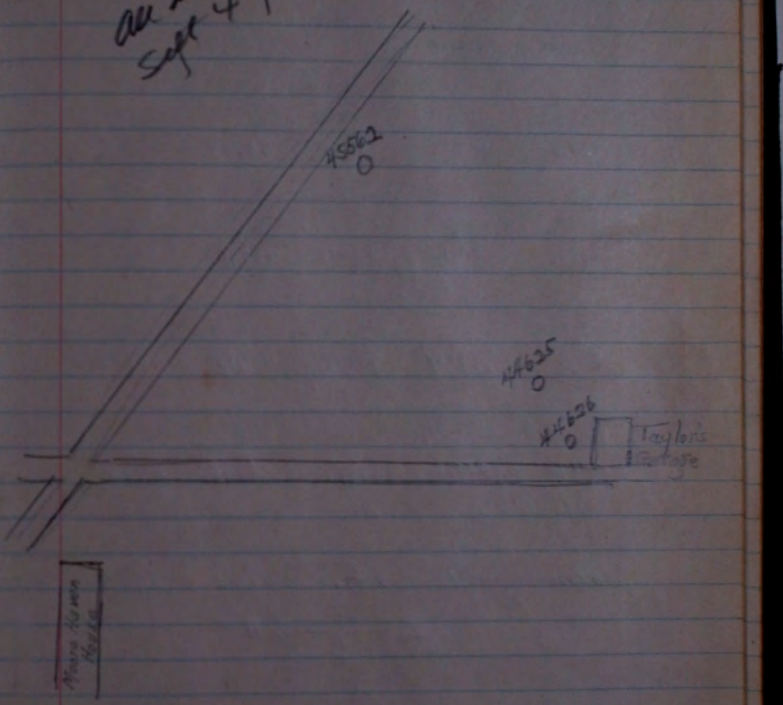
10 guatemalan seedlings express to Moore Haven. Ship these two orders together. Ship to A. O. Dayton.

Get Jas Kelsey & H. Myers to show me the McCain avocado tree. Kelsey has a Royal now full of green fruit.

Following are diagrams showing the location of the Guatemalan avocados received last week by Jack Taylor

The first diagram shows the location of the trees planted on Taylors lot in the town, across the street from the Moore Haven Hotel

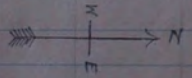
All shown Sept 4 1919



The diagram on the following page shows the trees on Taylors lot about 1/2 mile north of town.

Notes re condition Sept 4919

good 43560	fair 43560	dead 43602	fair 44856	fine 44782	dead 44783
dead 43476	fair 43602	dead 44625	fair 44783	good 45560	dead 44785
fair 44626	dead 44782	dead 43446	fair 44440	dead 44856	dead 44556
dead 43476	good 44439	fine 44626	good 44785	fine 44440	fair 44439
good 44625	good 45562	good 44785	dead 44440	good 44439	dead 45562
fair 43560	good 44782	fine 45560	dead 43602	fine 44856	dead 45560



Guatemalan Collection at Taylor's Farm.

⊙ Simmonds should be requested to propagate a good number of Gotteffredo for tidal lines in the Glades and upper state.

Duranta plumieri probably [illegible] is doing finely on Taylors farm. It is now a bushy 6 ft high bushy and in bloom. Should be a good ornamental for this region. Taylor says it gets frosted here.

Jack Taylor
Monroe Haven
✓ 50 Guat seedlings for distribution in Monroe Haven. ✓

Wednesday Avon Park Fla Mar 19 1919

Pittsburgh Fla Fruit Growers Assn
Avon Park

E M Brickell
5604 Forbes St
Pittsburgh

D.A. Saxbon Avon Park.

Geo. S. Kellogg. Avon Park. Fla
R.H. Stoddard Avon Park Fla
H.E. Masters Avon Park, Fla.

Bulletins to all above names

√x Set of about 25 budded trees to Pittsburgh Florida Fruit Growers Assn.

√ 100 Seedling grafts to C. S. Donaldson, Avon Park for distribution among people in this vicinity

Thursday Lake Wales, Fla Mar 20 1919

Mrs Harvey Stevenson
Avon Park, owner of Perfecta tree. Also has the largest Macadamia I have ever seen, bearing profusely nuts of good size.

Mr A. W. Allen of Lake Wales tells me of the following avocado groves in this region.

Mr Buntings grove, 1 acre of Trapp and 2 acres Fuerte and a few miscellaneous varieties, Perfecta, Solano etc. Less than 1 mile NE of Lake Wales. In charge of C.C. Thulbery.

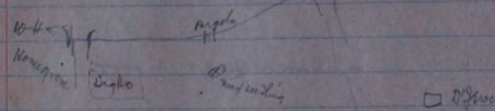
Mrs W. F. Adams grove at Crooked Lake, 1 acre Trapp and Waldin.

Frank Cody, Crooked Lake, has trees of about 12 varieties, about 100 trees all together.

A. E. Fairchild, Crooked Lake, has a dozen trees.

Ed. V. Lundberg, near Carrier at Winter Haven, 2 or some trees.

Dr Mary B. Jewett at Florence Villa, Mexicana seedlings in fruit + about 10 varieties scattered on lawn. F.V.



⊙ Send A. W. Allan, Lake Wales, avocado bulletin.

at Lucerne Park. see D. L. Collier for different Guatemalans.

In grounds of Hotel Wales, are 1 Trapp, 1 Fuelle, and 1 Beardsley (366 ⊂ 3).

In Bullard's yard, Lake Wales, are 10 trees of budded varieties.

√⊙ Send A. W. Allan, Lake Wales, 20 guat seedlings by express collect.

√ J. Morsey
Lake Alfred
50 Guat seedlings by express to be used for stocks.

W. D. Carrier, Winter Haven
Set of 25 Guatemalan budded trees

Saturday Winter Haven Fla. Mar. 22 1919

⊙ Tuerto seedlings losing color

Benik doing finely at Lucerne Park 2ft

Cantel doing very well 2 ft high

Mr Niles has sowed
#3602 Ishkol
#3934 Kasdleon
#4636 Benik
#4782 Cabral
#4783 Cantel
#4856 Tertol

W. M. McKay
✓ Winter Haven Fla.
6 Guatemalan seedlings. express.

Mrs. E. J. Peck
✓ Winter Haven Fla
3 Guat seedlings by mail.

Chas. Pugsley
✓ Winter Haven Fla
3 Guat seedlings by mail

Dr. J. a. West
✓ Winter Haven Fla.
20 seedlings by express collect

Wm H. Scofield
✓ Winter Haven Fla
3 Guat seedlings by mail

X ✓ L. D. Niles
Budwood of Gottfried
" of Fruitsing Guatemalans
50 Guatemalan seedlings

✓ J. E. Crump
Winter Haven
9 Gut seedlings

✓ Nellie L. Doan
Bonham, Fla
50 Gut seedlings

Wednesday Brooksville Fla Mar 26, 1919

Mrs Frank Harris
Vero, Fla

E. M. Dickins
Box 42. Lake Worth, Fla.

J. W. Perry
Hyplant Flas.

Above 3 people written to today offering avocado seedlings of thin shell Write to Washington

Jones is propagating this year

Phyllostachys bambusoides (gurikui)
"Madake" 60,000 plants

Phyllostachys sp. 23261 (SPI)
"Chu-tyk"? 10,000 plants

Phyllostachys sp 23233 10,000 plants

Phyllostachys sp. 40842
Sasaemal variety 200 plants

Phyllostachys sp. 40851
Shiromal variety 200 plants

Phyllostachys sp 23234
1000 plants

Nurseries A2 and A3 are diseased.
These contain 23261 and 23233.
Disease causes distortion and discoloration of young shoots.

The edible bamboo is Phyllostachys mitis

Madake (Ph bambusoides) is the most important timber bamboo in Japan.

For commercial grove plant Madake 6x6 ft. It is probable that it will take 10 yrs for a grove to come to maturity and furnish canes for furniture

Thursday Brooksville, Fla. Mar. 27 1919

Following is a list of some budded avocado trees received from Washington this week, to be planted in the test orchard here.

34904	G N Collins, Mexico	1 plant
26690	St. Petersburg, Fla.	8
38549	Guatemala	3
36270	Miami	4
44259	"	16
41725	"	1
39874	"	1
39370		1
19094	Mexican, Miami	4
19080	Collins, Guatemala	10
39369	Taft, Miami	2
	Harpe Seedling, Yarrow	2
	Puebla, Miami	4
	Fuerte, Miami	4
	Fuerte, Miami	8

Varieties of Loquat growing in the Garden.

Thales
Advance
Premier
35572 from Rome, Italy
Italy
29381
Early Red
Champagne

Rubus sp. 41265 Meyer's intron.

Read J. R. Kemble, Brooksville, Avocado Bulletin.

Sunday Punta Gorda, Fla Mar 30 1919

✓ J. H. Welch
Punta Gorda.
Set of 10 budded Guatemalan avocados
express prepaid

Joel Bishop
✓ Punta Gorda.
25 Guatemalan seedlings express prepaid

Samuel Huffman
✓ Punta Gorda
5 Guatemalan seedlings by mail

⊙ Vincent Howe
Bokeelia, Fla
send avocado publications.

Articles on the avocado in the Florida Grower:

May 26 1917. Avocado Varieties for Florida. E. D. Tosburg.

June 3 1916. The Guatemalan Avocado. W. J. Krome.

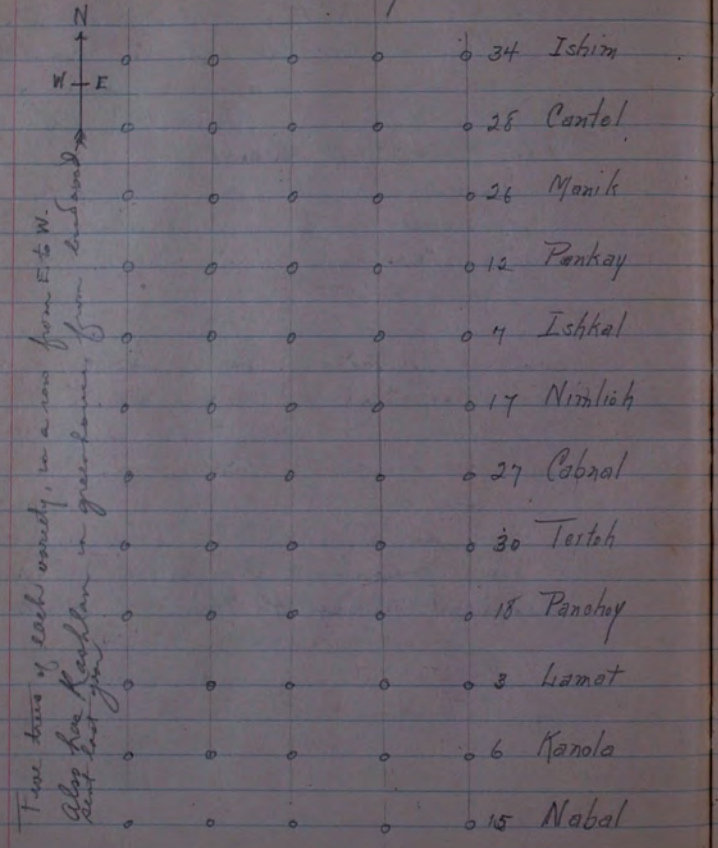
Feb. 2, 1918. The Avocado in Florida. John B. Beach.

Nov. 11, 1916. The Avocado in Florida

⊙ Look up report on Litchi by F. D. Cheshire, Consul at Canton, China.

Bokeelia

Guatemalan Avocados at Harry P. Johnson's Grove.



Monday Bokeelia, Fla. Mar. 31, 1919.

Fertilizer formulas from the catalog of the Wilson and Toomer Co., January 1918:

Ideal Avocado Special

Moisture	8 to 10%
Ammonia	4½ to 6%
Total Phosphoric Acid	6 to 9%
Potash, actual K_2O	3 to 4%

Made from Ground Bone, Peruvian Guano, Nitrate of Soda, Cotton Seed Meal, and High Grade Potash Salts

Cherokee Avocado Special

Moisture	10 to 12%
Ammonia	4½ to 5%
Total Phosphoric Acid	7 to 9%
Potash, Actual K_2O	0.50 to 1%

Made from Nitrate of Soda, Cotton Seed Meal, Peruvian Guano, Ground Bone and Pulverized Tobacco Stems.

Ideal Mango Special

Moisture	8 to 10 %.
Ammonia	5 to 6 %.
Total Phosphoric Acid	7 to 9 %.
Potash, Actual K_2O	9 to 11 %.

Made from ground bone, nitrate of soda, dried blood, dissolved bone black, and high grade potash salts.

⊙ Mr. Johnson has 7 trees of an avocado sent him by C P Taft under the name of Golden. Taft said it was a December fruit in California. It looks much like a West Indian. Johnson is now calling it Maria Theresa. Write Mr Taft and ask him if this is not one of the Cuban seedlings which has fruited at his place.

The method of avocado propagation used on avocados here is a modified saddle graft, leaving the top of the stock plant until after the scion has united with the stock.

The scion is tied in place with a narrow strip of rubber sheeting obtained from Sears Roebuck Co. This tape does not need to be removed, it rots and breaks off when the graft commences to swell.

Mr Hone obtains a high percentage of successful grafts by this method. He grows his young plants in the greenhouse in boxes and grafts them as soon as they are about six inches high. An excellent union is formed.

Notes on avocados in Harry Johnson's grove.

McCann. Originated at Fort Myers. The trees here, 3 yrs old, fruited last year. This variety has slender in habit, spherely branched the branches pleasing, not very strong. I do not like its habit of growth, tho it occurs to me more rapid growth than Taft's. Last year the fruit ripened in September, largely in mid October. Form, pyriform, color green weight 22 to 30 ozs. Seed medium size, quality good. We spent the evening some of the fruit until Christmas.

Meserve. This variety looks more promising here than anywhere else I have seen it. The 3 yr old trees are larger than those of any other variety in the orchard, and they are setting a crop of fruit. The foliage nearly looks like that of a Guatemalan.

Fuerte. Doing very well here. The 3 yr old trees are about 5 ft high and fully 5 ft in spread. They are now setting a crop of fruit.

Queen. Doing very well. In bloom. 3 yrs old.

Knight. Doing very well. In bloom and setting fruit.

Lula. Doing very well. In bloom.

Rey. Ditto, but a number of trees were killed out last year, presumably by injudicious use of fertilizer.

Golden. See page 92. Growing well. Trees now in bloom. Setting fruit.

Blakeman. Doing well. In bloom.

Challenge. Doing well. In bloom.

Perfecto. Doing well.

Champion Doing well. In bloom.

Family In bloom

Estelle In bloom

Oro Young plant, just set out

Pollock Doing well. In bloom.

Pubbla. Doing very well. Setting fruit.

Rhoad Doing well. In bloom.

Royal Doing well. In bloom.

San Sebastian O.K.

DeLorest. Still small, not in bloom.

Sharpless Doing well. In bloom.

Sinaloa Doing fairly well. In bloom

Solano Just set out

Sfinks Doing well. Setting fruit.

Taft Doing well. In bloom

Taylor Doing well. In bloom.

Trapp. Many tims. Doing well. In bloom

Walker. In bloom.

Nearly all of the above varieties were planted two years ago last month (April). They were Grafted here in December, and grown 3 or 4 months before planted out.

Also has here the Sanchez, a variety originated at Fort Myers. Pyriform, 20-24 ozs. purple, good quality, September to December.

30 varieties here in all, exclusive of the new Guatemalan set.

Mr Johnson had 40 varieties planted at Buckingham. On Feb 3 1917 there was a freeze of +18°F. and every variety except Fuerte was killed. Hoimaca, Ganter and Blake were among those that were killed. Val de Flores was also killed.

Mr Johnson, Mr Hoxie and myself voted for the three best varieties to plant here. The result was as follows.

Fuerte 1st place

McCann, Knight, Green } 2nd place, each rec'd 1 vote

McCann, Taft, Knight } 3rd place, each rec'd 1 vote

We next voted on the best 8 varieties for planting, three the list to include only varieties which have been planted here. The result was as follows.

Fuerte	3 votes
Knight	3 "
Green	3 "
McCann	3 "
Spinks	2 "
Taft	2 "
Trapp	2 "
Pollock	1 "
Walker	1 "
Perfecto	1 "
Solano	1 "

We then voted on the proportions to be planted in a grove of 100 trees of the 4 leading varieties. Results as follows

Fuerte	50	40	70
Knight	15	25	10
Green	15	25	10
McCann	20	10	10
	100	100	100

Above are our individual decisions on the relative number of each variety.

⊙ List Mr Johnson for Gottfried avocados.
Request Simmonds to send him
Boyanert beans.

✓ M. S. Roberts
Murdock, Fla.
6 Guat seedlings by express collect

C. M. Carver
Punta Gorda, Fla
100 Guat seedlings by express collect
to be shipped about October 1st

✓ B. C. Washington
Punta Gorda, Fla.
6 Guatemala seedlings express col

Joseph Falcons
✓ Punta Gorda, Fla.
6 Guat seedlings express collect

X J. M. Weeks
Punta Gorda
6 Guat seedlings express collect

Dell Huckleby
✓ Punta Gorda Fla (mail address
Cleveland, Fla)
6 Guat seedlings by express collect

✓ Dr D N. Mc Green
Punta Gorda
6 Guat seedlings express collect

F. M. Cooper
✓ Punta Gorda
6 Guat seedlings express collect

✓ Harry Dreggors
Punta Gorda
6 Guat seedlings

F. M. Powell
Woodrow. Fla
Express of Samsville Fla
6 Guat seedlings for October 1st express collect

C. M. Carrier
Punta Gorda
✓ 6 Grat seedlings ep & col

Wednesday Fort Myers, Fla. April 2 1919

✓ Send Mrs. John W. Upsall
Fort Myers, Fla.
10 budded Guatemalan avocados 2 trees
each of 5 varieties. Lauda Winkler Panchoy
Benik Cabral

✓ S. C. Kelly
Fort Myers
10 grat seedlings by e/p col

✓ Kelly Bros. Fort Myers.
Litto

Thursday Fort Myers Fla April 3, 1919

✓ C Bonnings Waffle Via Fort Myers 10 " "
✓ Dr H P. Boyce " " " " " 15 "

✓ E E Bamkopfer Ft Myers Fla
245 Fun Street Thirty Trees

✓ J L Walker Ft Myers Fla 25
✓ C Henderson Jr " " (25 Trees)
✓ J B. Cox " " "
✓ A H. Andrews (Asst. Aurora Eagle) Estero Fla 25
✓ [illegible] Fort Myers Fla
✓ W M Smith Ft. Myers Fla. 2 Trees
✓ J E Wilcox " "
✓ William Jeffcott 25 Trees Fort Myers Fla
The Koreshan Unity Estero Fla 25
✓ Fort Myers Laundry " " - 10
✓ James A. Martell - Trees - Fla more than 25
Catalog in advance of shipment.
✓ F B. Hunt - Ft Myers - 10
✓ W Stanley Hanson, Box 663, Fort Myers. 25
✓ C A Stuart Ft. Myers, 25
✓ W L Bryant Captiva Fla 25 Trees
✓ C B Bryant Ft Myers Fla 3 Trees
✓ G H Bryant Ft Myers Fla 25 Trees
✓ W B Graham Ft Myers 25
✓ [illegible] Ft Myers Fla 25 Trees

Chas Shrives Ft Myers 25.
✓ Wm Mcguire " " "
✓ Jas. Garfield Caxambas Ft Myers 25
✓ Hotel Bouton Marco. 25
✓ G W Brown Alva 25
✓ G W Foster Alva 25
✓ Frank Brown Immokalee 25

✓ A H. Andrews
mail address Estero, Fla
express to Ft Myers
(25 Trees) 5 set of 10 Guatemalans, 3 trees of each,
send him avocado & other literature.
25 Trees

✓ E. T. Shaw
Ft Myers
25 seedlings by exp col

✓ Alfred Michael
Wabasso. Fla
25 seedlings exp col

A. M. Dillard
✓ Fort Lauderdale Fla
10 Guat seedlings e/f col

✓ J. J. McCann
Punta Gorda, Fla
10 guat seedlings e/f col

Editor Punta Gorda Herald
✓ Punta Gorda, Fla.
2 Guat seedlings by mail

(6) Dr Harry Bystra
Brooksville Fla
Gottfried avocados

Sunday Oneco, Fla. April 6 1919

Mr Reasoner wants
Meyers Rubus from Brooksville #1265
Pocayitos

Singapore best mango, Mr Reasoner thinks

Seedling litchi bore at 7yrs
Layeres " 6yrs
Litchi midway between mango & lemon in hardiness, Ed Reasoner says. His layered tree produces very fine fruit, almost seedless.

Carambola bearing well in mango shed

Kaimita + Cabral only two of my great collection saved here. Others died from the bud wood sent last year. One tree of each now planted in the orchard.

Monday Bradentown, Fla April 7 1919

Dr. H. Braymer

H. W. Phelps

Ray A. Parker

Albert C. Mickse

Judge A. V. Barker

G. Weidman Groff
Canton Christian College
Bul. #12, The Papaya for S. China

M. le directeur de l'Institut scientifique
Saigon, Indochine

"all about the Mango" by V. R. Gadgil
241 Sadashiv Peth. Poona. As. 12

Bor Notes on the propagation of the Bor tree in East Khandesh, by B. G. Vagholkar, Poona Agrl. College Magazine Vol. VIII. No. 2.

Papaya Variation in the Flowers of the Papaya, by L. B. Kulkarni, in the Poona Agrl. College Magazine VII, No 1.

Notes on the History, Uses and Cultivation of the Papaya. H. J. Davis. Bul 37, Agrl Series of the Dept of Land Records and Agriculture, United Provinces. Lucknow. 1 anna.

GUATEMALAN AVOCADOS FOR FLORIDA

(Outline of a Paper to be read before the Florida State Horticultural Society at Orlando, May 6, 1919).

Introduction

Present status of Guatemalans in Florida. Future possibilities. Explorations carried on during last two years in Guatemala and Mexico. Personal experiences.

The Three Races of Avocados

Differences between them. Regions in which each can be grown.

Climatic and Cultural Requirements of the Guatemalan Race. - In Guatemala. Nursery Florida Stocks

Marketing

Sizes of Guatemalans. Shipping qualities.

What Varieties shall I plant?

Experimental plantings of many varieties desirable at present. Large commercial plantings of one variety undesirable. Best Guatemalans for various parts

of Florida. Fuerte Puebla. Mexican varieties for North Florida.

Notes on the most promising varieties.
The new Guatemalan introductions most promising are

12 Solano
15 Verde
1 Atlixco
11 Dinalva
5 Knight
13 Toft
14 Taylor
16 Wagner
17 Waldon
8 Perfecto
4 Grande
6 McDonald
10 Queen
2 Fuerte
9 Puebla
7 Northrup
3 Gottfried.

Thursday Washington DC April 24 1919

Guatemalan avocados available April 23 1919

#27	230 plants
3	24
21	131
26	190
18	157
17	253
6	239
33	73
23	150

Dr Galloway tells me there is no reason why we cannot ship avocados with the soil on the roots, if the consignee will pay the express charges. The seed must be removed to comply with the quarantine regulations.

April 25, 1919.

MEMORANDUM FOR THE OFFICE.

April 25, 1919.

MEMORANDUM FOR THE OFFICE
REGARDING GUATEMALAN AVOCADOS.

This is a brief summary of the situation with respect to our Guatemalan avocados in so far as relates to future distribution and propagation. A detailed summarized statement is being prepared showing distributions to date of budwood, budded plants, and seedlings of the Guatemalan introductions.

Guatemalan Seedlings. - All available Guatemalan seedlings are exhausted, so that there are none available for distribution at the present time. We have a considerable number of seedlings at Yarrow that we are holding for the purpose of propagating the rare numbers of Popenoe's Guatemalan set. Most of these seedlings are cut-off plants and are coming along nicely. We have 250 plants in eight-inch pots at Yarrow, with the new growth running sixteen to twenty inches high. These are in fine condition for budding. We plan to bud these with the rare

numbers not hitherto produced in quantity.

Budwood. - We have plenty of budwood of the common types (thirteen in all), such as -

Popenoe's No.	S. P. I. No.
3	43476
6	43560
7	43602
12	44785
15	44439
17	44440
18	44625
21	44626
26	45560
27	44782
28	44783
30	44836
34	45562

The original collaborators for the fruiting out tests received all the foregoing numbers, and some of the collaborators received additional numbers. The California collaborators received budwood of all of Popenoe's numbers except Nos. 8, 11, 20, 22, 25, 32, 35, and 36. It is very probable, however, that a number of the growers lost some of the

numbers sent them. In talking with Mr. Popenoe this morning, he said that this was the case in Florida and that the sets originally sent to some of these collaborators were now far from being complete. In view of the losses from the use of budwood when sent into the field, it would not seem desirable at this time to send out budwood of our rare numbers until we have budded our sets of plants, about twenty-five each. In the meantime, it would be advisable to communicate with those who received budwood for fruiting out tests to find out whether any of the numbers already forwarded are missing, and if so, such numbers could be supplied, provided the time is right for budding. It is probable that about three buds of each of the rare sorts can be furnished after we have completed our work, and in addition any of the common types that may be missing. If this is done, the fruiting out sets would be complete.

Budded Plants. - There is on hand now and available for distribution the following budded plants, all in five and six-inch pots.

Popenoe's No.	S. P. I. No.	No. of Plants
6	43560	239
17	44440	253
18	44625	157
21	44626	131
26	45560	90
27	44782	230
28	44783	24
30	44856	24
33	45561	83 (not in Popenoe's set)

Mr. Popenoe thought it might be well to make up sets, distributing these sets to the list of names which he secured on his recent trip to Florida. The rare numbers of which stock is needed and upon which we are now working are as follows:

Popenoe's No.	S. P. I. No.	No. of Plants on Hand
10	43834	29
11	43935	2
20	44627	36
22	44679	0
23	44680	60
25	44681	11
32	45505	9
35	45563	7
36	45564	7

(25 of each of these numbers to be budded at once)

It will be noted that there are ten numbers in all that will need to be increased to make up our complete sets. We propose to bud 250 good stocks now at Yarrow with 25 of each of the foregoing. These added to what we already have should by next September or October give us sufficient plants to make our final clean-up distribution and put us in position to handle the new material that Mr. Popenoe is planning to send in.

Mr. Beagles lacks three numbers to complete his set at Chico. These are Nos. 11, 22, and 36. We are planning to send him at once one plant of each of Nos. 11 and 36, leaving only No. 22 to be forwarded later. Please send order for the two plants.

Mr. Simmonds, according to Mr. Popenoe's inventory sent to us February 28 and very carefully made, lacks Nos. 11, 22, 32, and 36, four numbers in all. We will send at once to Mr. Simmonds three good buds of all of these in order that he may complete his set. We have already sent him these numbers four or five times but he does not seem to have success in getting them established. Please send an order for three buds of each of the foregoing for Mr. Simmonds. According to Mr. Popenoe, Mr. Simmonds has budwood of the following - 3, 15, 17,

18, 20, 21, 25 (rare), 26, 27, 30, and 33.

Dr. H. J. Webber of Riverside, California, in his letter of April 8 says that he failed to get two of the numbers sent him last year to grow. These are Nos. 6 and 10. Doctor Webber now has plants of all the fourteen numbers sent him except the two above. We will send him at once one plant each of Nos. 6 and 10 to complete his set. Please send an order for the same. I think it would be well to write to Doctor Webber and tell him that we shall likely be able to complete his set next September or October, at which time the numbers will all be on hand. He will need nine numbers to complete his set. Sending him the plants at that time will be better than sending him the buds now, as he has to depend on Mr. Popenoe to bud same. I am returning Doctor Webber's letter herewith.

I believe the foregoing clears all matters relating to the Guatemalan avocados. There is one other point I should like to mention. Mr. Popenoe says that he believes it advisable to make a distribution of the Godfried avocado, S. P. I. No. 46337. He says that this is a very promising type and that nurserymen do not have it. There is an abundance of budwood on the big tree at Miami. We could get

up the stock here if Simmonds will send the buds. If he has anything to bud on, he might get up the stock. I should say we ought to have 250 or 300 good plants. I think we should get up 200 or 300 of the Collins avocado in order to make a good distribution of a tree that gives us not only a fairly good fruit but a good stock for Florida.

Very truly,

BTG:EOJ

Plant Pathologist.

HINTS FOR SPEAKERS.

The following, prepared evidently by a thorough master in popular oratory, I commend:

Begin with a positive, concrete, striking statement. Tell your audience something at the start that will immediately grip their attention.

Use short sentences. Try to make one word do the work of two.

Avoid fine phrases. You aren't there to give them an ear-full, but a mind-full.

Talk to the back row of your audience; you'll hit everything closer in.

Talk to the simplest intelligence in your audience; you'll touch everything higher up.

Be natural and direct. Sincerity wears no frills.

Speak slowly. A jumbled sentence is a wasted sentence.

You represent The Department of Agriculture. Don't forget this. And don't let your audience forget it.

Finish STRONG and SHARP.

avocado industry. It does not appear to me that this region is a bit colder than the citrus belt of southern California. The occasional freezes are probably no more severe than those of California, and no one knows that California is going to develop an avocado industry.

Donaldson treated me royally at Avon Park. He has a good grove and has set out his Guatemalan plants in fine shape. At Winter Haven Taylor has also planted the set carefully. We will have a fine test of avocados on everglade muck at Taylor's place.

Brooksville, Fla., Mar 25 1919.

Mr Peter Bisset,
Bureau of Plant Industry,
Washington D C.

Dear Mr Bisset:

I reached here yesterday and found your letters of March 12 and 20, for both of which I thank you heartily. I am particularly glad to have yours of the 20th, assuring me that you can handle the distribution of the Guatemalan seedlings which are are preparing to place here in central Florida, as well as a further number of Guatemalan sets of budded varieties.

I am glad you are going to send a small set of trees to Major L R Groves. He was the father of Allen Groves and I would like him to have a few things from our office. Perhaps at some later time we can send him a few choice ornamentals as well.

I have visited Moore Haven, Avon Park, and the Winter Haven region since I last wrote you. I must say that I think the Winter Haven section one of the prettiest parts of Florida, and I also think it is destined to be an important avocado region in the future. The deep soil seems to suit the avocado much better than the limestone rock of Miami and when the people of Winter Haven get to planting Fuertes and Guatemalans instead of Trapps I am confident they are going to develop quite an

avocado industry. It does not appear to me that this region is a bit colder than the citrus belt of southern California. The occasional freezes are probably no more severe than those of California, and no one [illegible] California is going to develop an avocado industry.

Donaldson treated me royally at Avon Park. He has a good place and has set out his Guatemalan plants in fine shape. At Moore Haven Jack Taylor has also planted the set carefully. We will get a bona-fide test of avocados on everglade muck at Taylor's place. He is only a couple of hundred feet from the old shore of the lake, but the water table is now about 3 ft below the surface of the ground.

I have found the people all along the line keenly interested in avocados, and many of them want some Guatemalan seedlings to start out with. I enclose lists of the requests which have been made for plants. I hope you will be able to fill these. In the case of a request for budded plants I have usually looked into the matter pretty carefully to be sure the man was one who would take good care of them; with the seedlings it is not so important, of course, but even under these circumstances I have tried to place them as carefully as possible and not promise any considerable number of trees where I thought they would not be well used.

In shipping these trees by express, I am wondering if it would not be desirable to leave most of the soil on the roots. Niles says he received some Guatemalan seedlings from us last year, with bare roots, and he could not save many of them. I

do not know what your plans are; perhaps you already intend to ship everything with some soil on. If you do not, I would urge that you consider the matter and see whether or not it would be practicable to do so.

In regard to the budded trees, I believe we can place a considerable number of small sets to advantage. This will use up our surplus of certain numbers. These numbers of which we have large stocks are in many cases the strongest growing varieties and will likely be among the most valuable of the collection. Not everyone is so situated that he can handle a complete set, but by putting out sets of 10 trees, including perhaps 3 to 5 varieties, in various places, we will greatly extend our experiment and disseminate these new varieties.

I am going from here down to Ft Myers and then up to Punta Gorda, then to the Bradentown region. I presume it will be possible tp place a good many more trees in those regions.

I understand that Vosbury is again with Scott and has come down to Florida, but I have not yet seen him.

With best regards to all, I remain

Yours faithfully,

SEEDLING GUATEMALAN AVOCADOS

50 plants to H D Berry, P O Box 682, West Palm Beach, Fla. Ship by express, charges collect, to West Palm Beach.

25 plants to D H Conkling, West Palm Beach, Fla. Ship by express, charges collect.

25 plants to George O. Butler, West Palm Beach, Fla. Ship by express, charges collect.

25 plants to D W Boydston, Lake Worth, Fla. Ship by express, charges collect. This man would like also to be listed to receive ornamental plants for trial. He particularly wants some of the Guatemalan pacayitos (Chamaedorea sp), and a plant of Annona muricata when available.

25 plants to J.W.Means, Lake Worth, Fla., by express, charges collect.

25 plants to J.R.Poland, West Palm Beach, Fla., by express, charges collect. These plants are to be set out at Pahokee, on the east shore of lake Okeechobee.

25 plants to F.W.Sadler, P O Box 866, West Palm Beach, Fla., ship by express collect.

10 plants to Charles Myers, Hypoluxo, Fla., by express collect.

25 plants to Charles Edwards, West Palm Beach, Fla., by express, charges collect. These plants are to be set out at Pahokee, on the east shore of Lake Okeechobee.

25 plants to L.N.Simon, 627 Fern St., West Palm Beach, Fla., by express, charges collect. These are to be set out at Canal Point, on the east shore of Lake Okeechobee.

50 plants to C.C.Chillingworth, West Palm Beach, Fla., by express, charges collect. Plants to be shipped to Stuart, Palm Beach Co., Fla., notifying Mr Chillingworth at West Palm Beach when they are shipped.

6 plants to John H. Grant, Hobe Sound, Fla., by express, charges collect.

10 plants to H.B.Ward, 814 Sapodilla St., West Palm Beach, Fla., by express, charges collect.

10 plants to A.E.Zimmermann, Box 74, Lake Worth, Fla., by express, charges collect.

3 plants to G E Shappell, Port Sewall, Palm Beach Co., Fla., by mail under frank. This man also would like to be listed to receive interesting fruits and ornamentals, particularly guavas, papayas, and yams.

Seedling Guatemalan Avocados, page 2.

20 plants to A.O.Dayton, Moore Haven, Fla., by express, charges collect.

50 plants to Jack Taylor, Moore Haven, Fla., by express, charges collect.

100 plants to C.S.Donaldson, Avon Park, Fla, by express. If possible, it would be preferable to send these plants by prepaid express. They are to be given out to several people in Avon Park but can be shipped all together to economise on packing material. Mr Donaldson can arrange to pay the express charges, however, if they cannot be sent prepaid.

20 plants to A.W.Allan, Lake Wales, Fla., by express, charges collect.

50 plants to J. Morley, Lake Alfred, Fla., by express, charges collect.

6 plants to W.M.McKay, Winter Haven, Fla., by express collect.

3 plants to Mrs E J Pack, Winter Haven, Fla., by mail under frank.

3 plants to Chas. Pugsley, Winter Haven, Fla., by mail under frank.

20 plants to Dr. J.A.West, Winter Haven, Fla., by express, charges collect.

3 plants to Wm. H.Scofield, Winter Haven, Fla., by mail, under frank.

50 plants to L.D.Niles, Lucerne Park, Fla., by express, charges collect.

25 plants to Dr. J.E.Crump, Winter Haven, Fla., by express, charges collect.

50 plants to Nellie L. Cowan, Pompano, Fla., by express, charges collect.

BUDDED GUATEMALAN AVOCADOS

Dr. J.C.Fahnestock, 15 Seabreeze Ave., Poinciana Park, Palm Beach, Fla. He has a farm at Gomez, Fla., about 28 miles above Palm Beach. I believe it would be well to supply him with a set of about 25 trees, including as many of the following varieties as possible: Lamat, Kanola, Pankay, Nabal, Nimlich, Panchoy, Benik, Manik, Cabnal, Cantel, and Tertoh. Included in the shipment of budded trees he would like to have 25 Guatemalan seedlings for experimental planting. The entire shipment should go by express to J C Fahnestock, Gomez, Fla., and he should be notified at his Palm Beach address.

3 trees 9 years

E.S.Baldwin, 313 Lakeview Ave., West Palm Beach, Fla., has a nice little place in town with a number of avocado trees which appear to be receiving very good care. He has room for four more trees, and I suggest that we send him a set of four Guatemalan varieties, one tree of each. The following would be good if they are available: Kanola, Nimlich, Panchoy and Cabnal.

4

R.Whyte, Fort Pierce, Fla. Desires to receive a set of five Guatemalan varieties, two budded trees of each. I would suggest the following if available: Kanola, Nimlich, Panchoy, Benik and Cabnal. 10 trees in all, to go by express to Fort Pierce. This man has a large orange grove five miles west of town on heavy land. He is a very successful orchardist and member of the state legislature.

3 trees 9 years

Pittsburgh Florida Fruit Co., AvonaPark, Fla. Set of about 25 trees, including perhaps seven or eight varieties; or it might be well to send five trees each of the five varieties of whichw we have the largest stock. These people have picked out an excellent piece of ground on which to plant them, and promise to give the trees good care. Ship by express to Avon Park.

3 trees 9 years

W.D.Carrier, Winter Haven, Fla. Set of about 25 trees, including as many varieties as possible, to go by express to Winter Haven. Carrier is a nurseryman in a small way, and has started a fine test orchard on his place. He has many of the Guatemalan varieties of California origin, and should have our Guatemalans, His grove looks on the whole in better condition than that of L D Niles, at Lucerne Park.

3 trees 9 years

Welsh 10 trees 5 years
Mrs Upsall 15 trees 5 years
Andrews 25 - 5 years

REQUESTS FOR AVOCADO BUDWOOD

L D Niles, Lucerne Park, Fla., desires budwood of the Gottfried avocado from Miami, and of the Guatemalan varieties still missing in his collection. He received Guatemalan budwood last year but only succeeded in saving the following varieties: Ishkal, Kashlan, Benik, Cabnal, Cantel, and Tertoh. He would like to complete the collection and would be glad to have budwood as many of the remaining varieties as possible this spring. It should be sent before the first of May.

W D Carrier, Winter Haven, Fla., would like to bud over some Trapps to the Guatemalan varieties. I would be glad if budwood of perhaps 10 varieties, one or two budsticks of each, could be sent him either from Washington or Miami, preferably the latter, before May first.

NOTE: Quite a little budwood can be cut this spring from the trees in the stock nursery at the old garden in Miami. As these trees are not planted in such away that they can be left to fruit out, nothing will be lost by cutting them back for budwood. We will get our fruiting test on the top worked trees at the new garden.

Form 4b.
Approved by the Comptroller of the Treasury May 28, 1914.

SUBVOUCHER FOR MEALS AND LODGING.

No. _____

$_____

To be completely filled in before signature by payee, and there must not be any erasure or other alteration whatever.

City or Town, _____

Name of Hotel, _____

Date _____, 191____

USE ONE SIDE ONLY.

RECEIVED IN CASH OF _____

U. S. DEPARTMENT OF AGRICULTURE _____ and ___/100 Dollars,

for MEALS and LODGING from _____, 191____, to _____, 191____, inclusive.

Time covered, _____ day____, at $_____ per day.

If charge for fractional part of day is greater in proportion, it must be explained HEREUNDER.

I certify the foregoing to be correct.

(Signature) _____

(DO NOT SIGN IN DUPLICATE.)

(Title) _____

Form 4 D. USE ONE SIDE ONLY.

Approved by the Comptroller of the Treasury May 28, 1914. No. _____

Subvoucher for Supplies, Livery and Miscellaneous Services, and Expenses.

U. S. Department of Agriculture.

To _____, Dr.

Address: _____

_____, 191 .

For		
TOTAL, - - - - - - - - $		

TO BE COMPLETELY FILLED IN BEFORE SIGNATURE BY PAYEE, AND THERE MUST NOT BE ANY ERASURE OR OTHER ALTERATION WHATEVER.

RECEIVED IN CASH this _____ day of _____, 191 , from _____

_____ Dollars, in full of the above account, which I CERTIFY TO BE CORRECT.

Do not sign in duplicate.

(Signature) _____

(Title) _____

Witness to signature by mark.

_____ _____ _____

(Name.) (Address.)

Desiderata

Notes on material to be obtained on next trip south:

Guaiacum officinale from Guatemala

Persea sp. anay, herbarium material from Guatemala

Dahlia sp. Collection of the different varieties Guatemala. Herb. material

Chamaedorea sp. pacayito, from Guatemala. 5000 plants.

Dahlia coccinea, from Guatemala, seed and herbarium material

Chayota edulis from Guatemala all promising varieties

Annona diversifolia, from Tapachula Chiapas. 2000 seeds

Carica all available species from different regions

Annona cherimola budwood to replace that lost on last trip

Annona testudinea, from Guatemala

Persea schiedeana, budwood of choice varieties from Tactic

Juglans nobilis nogal of no. Guatemala. Herb. material for Dr. Rose

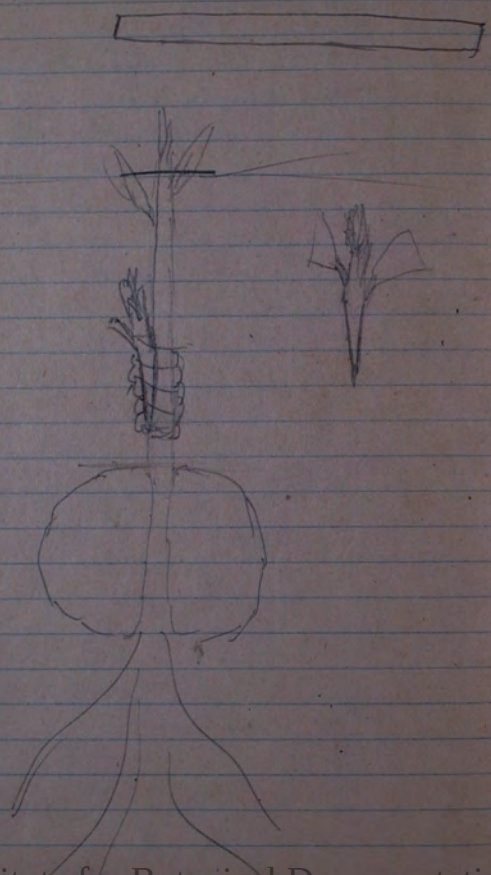
(D) In California secure data to complete history of avocado growing in California

Points to be emphasized in article on avocados for the Florida Growers:

Need of liberal irrigation in avocado groves.

Podocarpus macrophyllus

M. T. Dawe,
Cali, Valle, Colombia
see correspondence. Good move to keep in mind if I go to Colombia.



Importation of Bananas into the U.S.

	Bunches	Value
1915	41,091,585	$ 13,512,960
1916	36,754,704	12,106,156

Look up Chrysophyllum cainito

38908. Abacaxi. Look up stock

44104 Look up

38562 Cooke's avocado fr. last yr Seedling fruit from Cuba
38569 " " fr. last yr Antigua
38560 Seedling from Guatemala

Vera Solano Peralta
Light Hart,

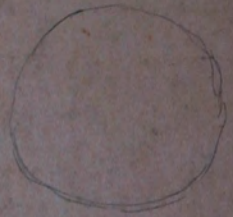
Dr. B. E. Dahlgren,
Field Museum of Nat. History,
Chicago, Ill.

A. C. Nydegger
Winter Haven, Fla.

The Art of Travel
Francis Galton

V

U. S. Department of Agriculture
Official Business
Penalty for Private Use — $300



103 W Pearl