either the regularity or the abundance of the
fruiting of these trees. It is reported to fruit ir-
regularly in the Philippines, but there are no rec-
ords of actual performance. A good crop was
borne by the Homestead trees in 1935, but prac-
tically no crop in 1936. This alternate bearing
may be characteristic of the species, or may have
resulted from the storms in the fall of 1935.

The oil of the soft lumbang is very similar in
its properties to tung oil, and is fully as valuable
for varnish manufacture. This fact was pointed
out nearly 20 years ago, but attracted little atten-
tion at the time. The development of the tung-
oil industry since then has served to call attention
once more to the possibilities of this species with
similar oil but adapted to southern Florida.

What is most needed at present is to gain for
the soft lumbang a wide testing in various parts
of the adapted portion of the state and to obtain
reliable data of the yields produced. The species
seems to offer distinct possibilities.

INTRODUCTION OF GOVERNOR CONE, MEMBERS OF HIS CABI-
NET, AND MEMBERS OF DELEGATIONS FROM THE SENATE
AND HOUSE OF THE 1937, FLORIDA LEGISLATURE IN
SESSION AT TALLAHASSEE

(Program Broadcast over Station WRUF)

Mr. Lyons: Ladies and Gentlemen: I have
the honor to present to you His Excellency, Fred
P. Cone, Governor of the State of Florida, the
Honorable Cary D. Landis, Attorney General of
Florida, the Hon. R. A. Gray, Secretary of State,
the Honorable J. M. Lee, Comptroller of the
State of Florida, the Honorable Nathan Mayo,
Commissioner of Agriculture, and Mr. Colin Eng-
lish, Superintendent of Public Instruction.

At this time I would like to introduce Mr.
Frank Holland.

Mr Holland: Mr. President and Fellow Mem-
bers of the Society: Polk County wishes to yield
this pleasure to Marion County. With permission
of this Society I am going to ask Horace Smith
of the Marion County Chamber of Commerce to
introduce the other distinguished guests.

Mr. Smith: Mr. President, Ladies and Gen-
tlemen of the Convention: We have with us this
afternoon the Senator from the 20th District, C.
A. Savage, Chairman of the Senate Group from
Tallahassee, honoring us with their presence. I
yield the floor to Senator Savage.

Senator Savage: Ladies and Gentlemen: The
Senate of the State of Florida thought enough of
this semi-centennial celebration here today to ap-
point a committee of five senators to represent the
Senate here, and come here from Tallahassee and
in that group we have Senator McKenzie, Senator
Parrish, Senator Holland and Senator West-
brook.

Mr. Smith: We also have with us A. P.
Buie, a member of the Legislature from Marion
County, who will present those representing the
lower house at Tallahassee.

Mr Buie: Ladies and Gentlemen: Without
adding to what Senator Savage has said to you
about the action on the part of the Senate, the
House took the same action. It is my pleasure to
introduce to you the members of the House dele-
gation, Messrs. Mays of Jefferson County, Drum-
mond of Holmes County, Harris of Alachua
County and Sinclair of Polk County.

Mr. Lyons: Governor Cone, Honorable Cabi-
net, Senators, Representatives and Distinguished
Guests, Ladies and Gentlemen: We feel it quite
a distinction to be honored by the presence of the
Governor and his Cabinet, the Senators and Rep-
resentatives of the State of Florida, to attend our
Fiftieth Anniversary, a Golden Jubilee Meeting of
the Florida State Horticultural Society. We will
remember, please, that the Legislature is in ses-
session, and as you know it is not a very easy mat-
ter to get away just at this time. However, the
Governor and these other gentlemen have seen fit to arrange their affairs, so that they could participate in this meeting here this evening, and we are trying to make their brief stay just as pleasant as possible. I know that it makes everyone who is a member of the Horticultural Society and the visitors that we have, happy also, to have them here. So, Governor, with these few remarks you are welcome here, and it is our genuine pleasure to make the stay of yourself and associates here, comfortable. I will now ask Mr. Hume to take charge.

H. Harold Hume: Friends of the Audience, and of the Radio Listeners: Before taking up our regular program, or the continuation of it for this afternoon, I am going to introduce to you for a few moments a friend of mine, who was my neighbor for many years, and has now become the Governor of our State—the Honorable Fred P. Cone.

Mr. Hume, President of the Horticultural Society, Guests and Friends:

I am mighty glad to be here this afternoon. You people are engaged in a great work. There are possibilities in this line of work that you people are engaged in which are not yet known, and they will be discovered from year to year, for the benefit and pleasure of mankind.

It is appropriate that we should meet upon this occasion to celebrate the Anniversary of your great organization. You are in a State of great possibilities for your organization, it being a tropical State, and Florida is a great State. It has many advantages over other States of this Union. We have a varied climate; we have varied resources; we also have a cosmopolitan population and citizenship; we have people in this State from every State in this Union, and from almost every other Nation of the world. They have come to enjoy the many opportunities that we have and the many pleasures that we have in this great State. I am glad of the opportunity to be with you people; I have enjoyed my little visit here today in the beautiful City of Ocala; I have enjoyed seeing your great farm market and your flower-show, which is a real pleasure to the people who enjoy flowers, and I want to tell you that the ladies of this country are doing a great thing along that line. The ladies and flowers, both beautiful and sweet, go together, one with the other, and it was with pleasure and appreciation that I visited your magnificent flower show today.

I have been enjoying myself every minute of my stay. I only wish my duties were such that I could spend a longer time with you people, and I want to be able to be with you at your next meeting, wherever it may be in Florida.

May your possibilities grow from year to year until the great possibilities of Horticulture, along with our great Agricultural interests in this State, will move hand in hand, not only for the beautification and the pleasure of our people, but for their benefit also.

I won't intrude upon your time. I hope your meeting will all be pleasant and beneficial to the members and other citizens who are interested in your great work. I have enjoyed being with you. I have come, and I will come again. I thank you and thank you again.

Mr. Hume: I am going to ask Hon. Nathan Mayo, Commissioner of Agriculture, to speak for us for a few minutes.

Hon. Nathan Mayo: Mr. Chairman of the Florida State Horticultural Society, Ladies and Gentlemen:

There is nothing of more importance to the human race than Horticulture. It includes many kinds of agriculture, and without this industry the people would perish from this earth.

The Horticultural Society of Florida has rendered a splendid service to the State by meeting and deliberating on the problems of this primary industry, and furnishing to the public the knowledge gained by years of experience. We have reached a point when legislation is demanded for every kind of business, and the law makers are interested to know the needs and wishes of the farmers of this State, to the extent that there is an agreement on subjects relating to the growers and their crops, and these agreements should be furnished to our legislature for their guidance.

Florida's sixty vegetables and seventy fruits cover a wide range of requirements, both in the production and marketing of these products. This diversity of crops gives us advantage, not en-
joyed by other States, but the season for marketing covers the year around, which is an additional advantage, for which Florida is to be thankful. Your meetings which this organization has, is a school in which all may both learn and instruct on subjects of interest to the members and visitors. Your deliberations should be given the widest publicity, and your meetings will make a record of progress for the industry as the years go by.

This is a year for taking the agricultural census for the enumeration of your crops. I hope those selected to make this census will receive the cooperation from those who make the estimate of the crops, which will be made by county units, and no names of the individual farms will be given. So give this information freely, my friends, and I will assure you I will not report it to the tax collector. The only thing we want is an accurate estimate of your crops.

The Department of Agriculture belongs to you, and I want you to use it in every way possible. This is a job you have given me, and I solicit your full cooperation. I have endeavored to be constructive in my administration of the office of Commissioner of Agriculture, and I hope I have been, at least, partially successful. If, at any time, the nine divisions of my department can be of service to you, please call on me. I am most happy to be with you on this occasion, And I thank you.

Mr. Hume: The State Horticultural Society has been highly honored by the presence of our Governor, the Cabinet and the Members of the State Legislature, and now, ladies and gentlemen, I have the pleasure of introducing one of the leaders in the field of research with tropical fruits, Dr. H. S. Wolfe, who will discuss “Fifty Years of Tropical Fruit Culture in Florida.”

FIFTY YEARS OF TROPICAL FRUIT CULTURE

Dr. H. S. Wolfe, Homestead

Fellow Horticulturists:

Just in case any of you may be in doubt concerning the matter, let me preface my remarks by an emphatic denial that I was here fifty years ago and that I speak from firsthand experience. I have had to place much dependence upon the Proceedings of this Society for the information which I am to present concerning conditions during the past half century. My seven years in the state have enabled me to get a fairly accurate picture, or so I believe, of the situation today as concerns tropical fruit culture. It interested me, and I hope it will interest you, to see what progress has been made in the fifty years since this Society began its splendid work.

It so happens that the year 1887 marks also the date when the newly established Division of Pomology of the U. S. Department of Agriculture asked Pliny Reasoner and W. G. Klee to write a report on the “Condition of Tropical and Sub-Tropical Fruits in the United States.” We have, therefore, a reliable basis for the statements regarding conditions of that date in the famous Bulletin 1, issued in 1891. Furthermore, it was in 1887 that Reasoner Brothers issued their first big nursery catalogue of tropical plant materials. The year of the founding of this Society has, therefore, double or triple reason for being a logical starting point for considering the development of tropical fruit culture in Florida.

In 1887 there was only one tropical fruit grown on a commercial scale in Florida, and that was the pineapple. Red Spanish was the variety mostly grown, but Abakka, Smooth Cayenne and several others were also produced. Plantations were largely limited to the Keys, but smaller ones were found up both coasts.

Semi-commercial plantings were to be found of avocados and mangos, both of which fruits were already being shipped in small quantities to New York and Boston and bringing good prices. Seedling groves were bearing on Key Largo, although
the shallow soil seems not to have been very favorable, and there were several seedling trees on the Pinellas peninsula and on Biscayne Bay, besides a nice grove on Marco Island. It is interesting to note that only one bearing tree was reported for California then. Mangos were being shipped from the West Indies to New York, and Florida growers were setting out seedling trees in Orange, Polk and even Lake counties. There were a number of bearing trees on the Pinellas peninsula, at Bradenton and at Ft. Myers, and 1,000 young seedlings had just been set out on Pinellas. While the seedling varieties were not propagated other than by seed, Reasoners had imported seed of fine varieties from India and even offered three grafted Indian varieties. They had just begun propagation by inarching, and over at Palm Beach the mango had been budded experimentally by John Beach. More future was seen for mangos than for avocados by the horticulturists of that day, and such seedling races as Apricot and No. 11, which lacked the turpentine flavor of the common seedlings, were especially in favor.

Bananas of several kinds were also being grown on a semi-commercial scale in many plantations along the coast, the fruit being sold to coasting schooners which carried it to Florida ports for local consumption. Sugar-apples were being planted on some of the Keys where the soil was exhausted for pineapples. Guavas grew wild all over South Florida, with many strains recognized already, but were hardly to be considered as cultivated. The Mexican lime grew wild on the Keys, but no groves had been established, whereas there were several small groves of the Persian or Tahiti lime in the “lake region.”

It will be noted at once that the fruits which have become important cultural industries during the life of the Society were already being grown at least semi-commercially. Only a single new tropical fruit has been added to the list of commercial species in the past fifty years, the papaya, but great changes have taken place in some of the old ones. Pineapples, bananas and guavas stand today almost exactly where they were fifty years ago, except that each has diminished in importance relative to the whole tropical fruit situation. The same varieties of these three fruits were grown fifty years ago as are grown today. Only mangos, avocados and limes have gone forward and evolved into real industries. Let us see a little more of the path they followed.

The mango was considered the most promising tropical fruit in 1887, and its culture spread rapidly. Five years later there were bearing trees in Orange, Polk and Lake counties, as well as all over Hillsborough, Manatee and Lee. In 1893 Pinellas shipped thousands of bushels of fruit to New York and glutted the market so that very low prices were received. The “big freeze” of 1894-95 killed these trees, as well as those in South Central Florida, and also the seedlings and inarched trees from India which Reasoner had imported. Similarly the freeze of 1886 had killed the first imported Indian varieties which Rev. D. G. Watt had secured in 1885.

In 1889, however, the U. S. D. A. had imported several inarched specimens of the Mulgoba variety, largely because of the insistence of the Rev. Elbridge Gale, who had settled at Mangonia on Lake Worth in 1884. Most of these trees failed to survive the cold of 1895, but one specimen on Gale’s place did survive and finally fruited in 1898. The quality of its fruit was so remarkably superior to that of any of the available seedling varieties that it created a tremendous wave of enthusiasm for mango importation and propagation.

The beginning of the century was also the beginning of a real mango industry. In 1900 George Cellon discovered that patch budding could be used for mango propagation, and started the first commercial mango nursery. Back in 1893, Wm. Neeld of Pinellas had used the shield bud successfully, but had found it more difficult to bud mangos than citrus. The ’95 freeze ended his mango aspirations. Reasoner and Beach were partial to inarching, but that is too slow and cumbersome for large scale propagation.

The year 1901 saw the first of the stream of importations of fine India varieties which followed in the wake of Mulgoba. The U. S. D. A. brought in Amini, Rajpuri and Sandersha, among others, and Beach imported Fernandez, Goa and Kavasji-Patel. Reasoner was importing, too. Next year the U. S. D. A. imported Bennett, Borsha, Cam-
bodiana and Paheri, with other less desirable ones. Many importations followed in later years, but none has been of permanent value other than these first ones.

In 1908 the original Mulgoba tree had a big crop, and Bennett, Fernandez and Sandersha had fruited, whetting still more keenly the appetites of mango enthusiasts. But two years later the Mulgoba and Bennett are both reported as shy bearers, a reputation they have maintained ever since. A seedling from Mulgoba, however, had fruited that year on the place of Mrs. Florence Haden in Coconut Grove, and Cellon at once started propagation of the beautiful fruit which we know as Haden. No seedling or imported variety has been discovered since then which compares in attractiveness and prolificity with Haden, and it has been the commercial variety ever since its first propagation. Such mango industry as Florida has today is built upon the Haden variety, and consists of a couple of hundred acres only.

The avocado ranked third among tropical fruits in 1887, and like the mango was already being planted at that time in grove form. In 1892 there were reported bearing trees in Hillsborough, Orange and Polk counties, but the cold of 1894-95 ended the promise of many of them. The planters on the Pinellas Peninsula and along the Indian River gave up trying to grow avocados, but the settlers along Biscayne Bay were encouraged by seeing how well their trees had come back after the freeze.

Like the mango again, the avocado industry really dates from the first year of the new century, for it was also in 1900 that Cellon started the first commercial avocado nursery. Lacking an imported grafted variety such as the Mulgoba mango, for nowhere in the world has the avocado ever been propagated otherwise than by seed, he made selections among the numerous seedlings fruiting in the Miami area. Two of these seedlings, one of superlative quality and medium early, the other of very good quality but unusually late in season, he selected for propagation as named varieties. These were the Pollock and the Trapp, first budded in 1901. It was also in 1901 that seeds of Guatemalan type were imported for the first time by the U. S. D. A., but more of that later.

The first extensive planting of budded avocados was a grove of 20 acres of Trapps, set out by S. P. Bliss in 1905 near Coconut Grove. Other groves followed rapidly, both in the Miami area and in the Redlands, Trapp being planted mostly because the highest prices were received in December.

The desire to extend the avocado season later into the winter, or even through spring, was ever present, and became stronger as the reports came from California in 1912 of the success of the Guatemalan varieties imported there. The Guatemalan seedlings planted at Miami in 1901-06 also began fruiting about 1911 and showed how late in the spring it was possible to have fruit. All of the promising California varieties, both Guatemalan and Mexican, were imported to Florida, and their offer to the Florida trade in 1914 gave a second impetus to avocado growing. Popenoe was sent to Central America by the U. S. D. A. to comb the native haunts of the Guatemalan type for the best seedlings, and sent in a large number.

In 1917 the Trapp variety still constituted 90% of the budded groves, and it is fortunate that the planting of Guatemalan varieties was not more precipitate, for most of them proved failures. They encouraged the planting of avocados in the Ridge section, however, and by 1920 there was as wide a distribution of avocado groves as there had been of seedling plantings prior to 1905. This gave a splendid opportunity for testing the hardiness of the many varieties then being propagated. There were groves in Dade, Lee, Highlands, Palm Beach, St. Lucie and Polk counties.

The slow process of weeding out unsatisfactory varieties continued over many years and, indeed, has not yet ceased. There are today many Taft trees in the Redlands which should have been topped to something else ten years ago or more. The fruiting habits of avocado trees became much more intelligible, however, when Stout came to the Redlands in the spring of 1925 and enlightened the growers on the peculiarities of avocado flowers and blooming. After the introduction of Guatemalan varieties, this work of Stout is the
next important step in the development of a rational avocado industry.

Because the avocado plantings were so much more extensive than the mango plantings, they were more seriously affected by the boom of 1925. It has been estimated that prior to 1925 there were nearly 3,000 acres of avocados planted, with an annual production of over 50,000 bushels. The boom and the hurricane the following year left many of the older groves in wreckage, especially in Dade County, and production dropped to 5,000 bushels in 1928. There was renewed planting activity for a few years thereafter, but the demoralization of the market during the summer and early fall months by unrestrained Cuban competition has served to check avocado planting now for several years. There are probably about 2,000 acres of avocado groves in the state, and nearly all of these are of bearing age. Trapp accounts for only about 10% of the plantings now, but is still one of the leading varieties. Varieties of Florida origin, whether West Indian, Guatemalan or hybrid, constitute about 80% of all plantings, and this ratio will increase in the future undoubtedly.

While limes were the least important of the tropical crops grown in grove form in 1887, they have long since advanced to second place. The Keys were then considered as logical sites for avocado, mango, pineapple, orange, grapefruit, and various other fruits, but gradually these others passed out of the picture and left the little wild Mexican lime supreme. By 1916 there were 1,500 acres of these limes set out in such grove form as is customary on the Keys, mostly young trees. The boom was hard on these plantings, however, and today there are not over 400 acres remaining. Meanwhile the Persian lime, which had been longer cultivated but not so extensively, has come into prominence in the past few years. A grove of 300 trees in 1904 at Coconut Grove was an event, and probably in 1930 there were not over 100 acres of Persian limes altogether in Florida. Today there are probably 2,000 acres of this and the Perrine lemon, whose culture and requirements are very similar, planted on the Lower East Coast and in the Ridge.

The papaya is the only case we have of a semi-commercial fruit industry today which was not started in a small way fifty years ago. It is a very small industry, but it is one. In 1913 there appeared the first paper on papaya culture in the reports of this Society, and the next was not until 1930. The growing of papayas took a great increase during the decade 1920-1930, and in 1929 a marketing association was organized. The acreage has never been large, however, and periodic cold winters reduce expanded plantings regularly.

Thus far we have dealt only with commercial or semi-commercial fruits. But one of the joys of a Florida home is the tremendous number of non-commercial fruits which can be grown for home use. The following list includes species known to have fruited in Florida by 1887:

- Aechras sapota
- Anacardium occidentale
- Annona cherimola
- Annona muricata
- Annona reticulata
- Annona squamosa
- Carissa arduina
- Cyphomandra betacea
- Eugenia jambos
- Eugenia uniflora
- Nacuna nervosa
- Malpighia glabra
- Mammea americana
- Melicocca bijuga
- Monstera deliciosa
- Phyllanthus acidus
- Psidium cattleianum
- Rhodomyrtus tomentosa
- Spondias lutea
- Tamarindus indica
- Triphasia trifolia

In addition to these should be named the little Red Ceylon peach, which supplies the Lower East Coast with peaches for the home in May. It had been fruiting several years for its originator and was being propagated by a nursery. All but one of the above species are still common in Florida.

A slightly longer list can be made of tropical species which had not yet fruited in Florida but which were available for planting fifty years ago:

- *Adansonia digitata*
- *Aleurites moluccana*
- Annona spp. (10 of them)
- *Antidesma bunius*
- *Artocarpus incisa*
- *Artocarpus integra*
It is also of some interest to note that thus early
Albizzia lebbek and Melaleuca leucodendron were
being offered, and that Casuarina equisetifolia was
already very common in Key West. Many other
common and less common ornamentals of today
were also available then, but they are outside the
province of this paper.

By 1900 there had been several years in which
to test these fruits, and many had proven suited
for Florida culture. All of those which had
fruited by 1888, and also those marked with a
single asterisk in the other list, were considered by
1900 as proven. Those marked with a double as-
terisk were still considered promising, and there
were also the following new species to add to that
list: Casimiroa edulis and Garcinia mangostana.

It will be noted that many species have fallen
by the wayside, and undoubtedly these either failed
to grow or were killed by the "big freeze" of 1895.
They are nearly all species which are very tender
and of which the seed is especially hard to import
viable. Most of them are still not to be found in
Florida anywhere, at least not fruited. Of those
marked promising in 1900, only the lychee and per-
haps the carambola are entitled to a higher rating
today.

In the years that have gone by there has been a
vast number of tropical fruits introduced to Flor-
ida culture, especially by the U.S.D.A., but few
of them have persisted. The following include all
of the species fruiting in Florida today and not in
the above lists:

- Carissa grandiflora
- Dovyalis hebecarpa
- Eugenia jambolana
- Flacourtia ramontchi
- Garcinia livingstonei
- Nephelium longana
- Spondias cytherea
- Spondias purpurea
- Uvaria rufa
- Zizyphus mauritania

We have not made great progress these fifty
years in the number of species available for plant-
ing in Florida, although we have learned a great
deal about what species are not suited to our con-
ditions. Only the leader of a forlorn hope would
still plant the mangosteen and the breadfruit. On
the other hand, the lychee has become firmly es-
tablished in two sections of the state, and may
evem become a semi-commercial fruit.

The lychee is an interesting case of success after
many failures. It was first introduced in 1886 into
Orange County and probably was lost in 1895.

Then Reasoner obtained a specimen on a longan
stock, and this tree fruited in 1902—the first lychee
fruit produced in this country. This tree died
also, of unknown causes. Then in 1906 a number
of lychee trees were imported by the U.S.D.A.,
and several of these on the West Coast survived
childhood. One of these fruited at Oneco in 1916,
and ever since then has been the source of propa-
gating material for marcottage. Of the many
rooted cuttings prepared and distributed in this
way, a scant dozen have lived and fruited in Dade
and Lee counties, with occasional trees elsewhere.
There is also a small grove in Polk County dating
from 1922. The lychee may be widely planted
within the next ten years, for it endures a wide
range of temperatures and soils, if it can be prop-
agated more cheaply.
We have today some thirty or forty minor fruits which are grown in a very small way over a considerable territory, but which are as unimproved today as they were fifty years ago. What has been done with the avocado and mango may be done to some degree with them, although none of them has such great potentialities as they had. The steps of development are always the same: first, the selection of superior seedlings for vegetative propagation as varieties; second, the control of the diseases and insect pests which are sure to follow in the wake of any large scale planting; and third, the education of the public to appreciation of the fruit. We have made the initial importations of the species, although a vast number still await importation, but we have taken none of these developmental steps in the case of any of these minor fruits. That task confronts the horticulturist today as a challenge. Let me not be misunderstood, however, as intimating that the problems of our avocado and mango industries are solved. There is as much need as ever for finding better varieties in both cases, and the history of these fifty years teaches us that we must look to selection of seedlings from natural hybrids of our imported varieties for the answer to the variety problem. We need not expect to import directly any ideal variety. Our importations are of value only as the source of variations among which to make selections.

As the concluding portion of this paper, I wish to call the roll of those agencies or individuals which have been of special significance in the development of tropical fruit culture in Florida. First must come the name of Reasoner Brothers. I know of nothing more remarkable or romantic in the history of Florida horticulture than the way in which these two Illinois farm boys, Pliny just over twenty and Egbert his junior by five years, with meager capital but boundless enthusiasm and ability, managed to develop so extensive a correspondence and to propagate unfamiliar plants so successfully that within five years from the start of their precarious adventure they were able to offer a variety of tropical plants never equalled before or since in Florida. If we except the avocado and mango, all but a dozen of the species and varieties found today, and many not available today, were offered by them in 1888. Only one who has tried to import seeds of tropical fruits, and has seen lot after lot arrive already dead because of the long time needed for the journey and the short viability of the seeds, or who has written repeatedly but vainly in search of a source of seeds of some species, can fully appreciate what that imposing list of nursery plants meant. That nursery remains today the only source of any wide variety of tropical fruits.

The second name is that of our own David Fairchild. Organizing the office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry in 1898, he was responsible for the establishment of the Plant Introduction Garden at Miami, and in person explored all over the world for tropical fruits to send back. To his enthusiasm for exploration, introduction and utilization, tropical horticulture in Florida has not yet ceased to owe a large debt, and we are happy in having him still here to encourage us.

While Cellon and Beach were the outstanding early propagators of mangos and avocados commercially, I believe that the third name should be W. J. Krome, in whose honor this section of the Society is named. Both industries are in no small measure the result of his intelligent observations, his careful experiments and his wise counsel.

No list, however brief, could omit the name of Wilson Popenoe, not alone because of his explorations in Central and South America for plants, but also because his "Manual of Tropical and Subtropical Fruits" is our only comprehensive treatise. I wish also to pay tribute to the many years of study of avocados and mangos by H. E. Stevens, whose work is almost our only guide in the control of their diseases.

It is obviously impossible to attempt to name all who have played more or less important roles in this field, or to evaluate their work. It is of more importance to think instead of what remains to be done, and to set about doing it. Even if no important industry results from the minor fruits, they will always add greatly to the satisfaction of living in Florida. The necessity of guarding against importation of foreign insects has greatly increased difficulties of importing seeds of tropical
fruits, few of them surviving the ordeal of treat-
ment, but by continued effort we can gradually
increase the number of species available. We can
select and propagate the best strains. And it is
not too soon to begin.

Mr. Hume: It is particularly fitting at this
time that we should have a review of the Tropical
Horticulture of Florida for a record. I want to
introduce now another speaker who has done
much research and investigation on the life and
work of one of the greatest plant men in history.
Our speaker, T. Ralph Robinson, will bring us
new information on his life:

HENRY PERRINE, PIONEER HORTICULTURIST
OF FLORIDA

T. Ralph Robinson, Senior Physiologist
Division of Fruit and Vegetable Crops and Diseases
Bureau of Plant Industry, United States Department of Agriculture

Plant introduction, so all important to a newly
developed region like Florida largely dependent on
her horticultural products, is commonly thought of
as a recent enterprise. And so it is, at least on a
systematic and world wide basis such as is ex-
emplified in the monumenatl work of Dr. David
Fairchild and his collaborators of the United
States Department of Agriculture, such men as
Popenoe, Swingle, Meyer, Dorsett, Cook, and
Collins. Private introductions by such men as
Pliny and Egbert Reasoner, Taber, Meade, and
Nehrling have also contributed richly to Florida's
store of plant material during the last half cen-
tury. While we are at this meeting stressing the
historical side of Florida's horticultural develop-
ment it seems especially fitting to remind our
present day fruit growers that almost 100 years
ago a valiant and well planned effort was made
to establish in Florida new industries capable of
producing for the nation many of the tropical
crops that were at that time either unknown or
secured through costly importation. This was the
dream and lifetime effort of Dr. Henry Perrine,
to whom Florida has given, I fear, scant recog-
nition. Some account of his life, aims, and tragic
death may serve to accord to him the belated
tribute due to such a "hero of agriculture," a title
recently bestowed upon him in an appreciative and
fascinating article contributed to the Bulletin of
the Garden Club of America (November, 1931).
This article was written by Frances Cleveland
Preston, wife of the late President Grover Cleve-
land and a step-daughter of Henry E. Perrine, a
son of Dr. Perrine.

Henry Perrine was born April 5, 1797, at New
Brunswick, New Jersey, of French Huguenot an-
cy. He studied medicine and soon after re-
cieving his degree in Philadelphia went to Ripley,
Illinois, to practice medicine, later removing to
Natchez, Mississippi. Due to ill health following
accidental poisoning he decided to seek a still
milder climate and secured in 1827 an appointment
as U. S. Consul at Campeche, Yucatan, where he
remained for ten years. He was interested in
botany and made extensive collections of the plants
growing in that region. These herbarium speci-
mens are now to be found in the collections of the
New York Botanical Garden. During his stay in
Yucatan he survived serious attacks of both yel-
low fever and cholera and is credited with having
had unusual success in treating these diseases
among the natives, services which he rendered
gratuitously.

Soon after his arrival in Yucatan he received
from Richard Rush, Secretary of the Treasury,
at the instance of President John Quincy Adams,
a circular letter calling on consular officers to se-
cure plants of probable utility for cultivation in
the United States. A Treasury Circular of Sep-
tember 6, 1827, states that "Dr. H. Perrine ap-
ppears to be the only American Consul who has
unreservedly devoted his head, heart, and hands to