

MARCH 1985

NEWSLETTER MAIL ADDRESS: ARNOLD & LILLIAN STARK
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TAMPA, FLA. 33610

QUERY: What is purple and conquered the known world? Answer: (Somewhere in this newsletter!)

FRUIT TREES FOR CENTRAL FLORIDA

by Bob Heath

This is the first of a series of articles on fruit trees especially suited to cultivation in central Florida.

THE JUJUBE (Zizyphus species)

There are several species of the genus *Zizyphus*, native to the Orient and the new world, and presently cultivated throughout the temperate and tropical zones of the world. These include the Texas buckthorn, *Zizyphus obtusifolia*, the Indian jujube, *Zizyphus mauritiana*, and the Chinese jujube, *Zizyphus jujuba*. We are primarily concerned with the Chinese jujube, because it is the most desirable member of this genus. The Chinese jujube is a small, often spiny, tree reaching a height of approximately 30 feet. The tree is upright with deep green shiny deciduous foliage. Its leaves are alternate, 3-lobed, 1-1/2 to 3 inches in length. Small greenish flowers are produced on slender branchlets. The fruit is a drupe, elliptic, spherical in form, resembling a very large olive. The flavor is similar to apples or dates. The fruit grows to 2 inches in diameter and ripens to a deep brown from July to November, depending on variety. The flesh is whitish, crisp and sweet, with a hard two-celled seed. The jujube is said to be one of the five principal fruits of China and has been cultivated for over 300 years. The first grafted Chinese jujubes are reported to have been brought to the United States by the Department of Agriculture in 1906.

The jujube is hardy in central Florida and is slow to bud out in the spring, which makes it very successful in this area. It is, however, plagued by fungus diseases during the humid summers. The jujube is also precocious and prolific in fruiting and rarely fails to produce a good crop. They are relatively short lived trees and rarely live more than 35 to 40 years, which I'm sure is not a limiting factor for a door yard fruit, since the tree is sure to outlive most of us. The jujube may be whip-grafted on seedling jujube stock. The seeds are slow to germinate, and should be two years old before grafting is attempted. The varieties we recommend are Lang, Li, Leon Burke, Giant and Silver Hill. Seeds from these varieties may be propagated but they will not come true. The fruit will usually be less than an inch in length. The tree seems to enjoy brilliant sunshine, dry weather and long hot summers. It grows well in light sandy soil without too much irrigation. The fruit may be eaten fresh, dried, baked or candied and preserved.

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KNOCK, KNOCK.

Who's there?

Banana.

Banana who? (To be continued next month.)

* * * *

HOSPITALITY TABLE

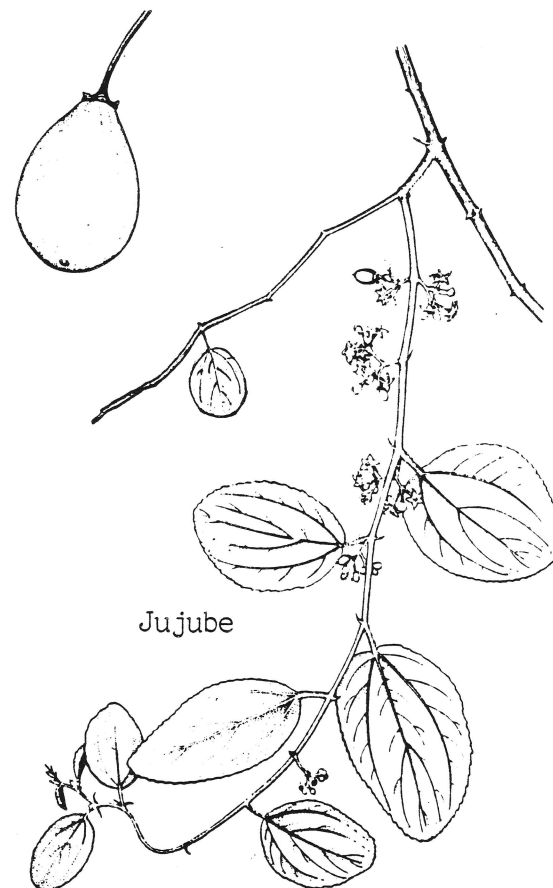
Feb. 10, 1985

Bruce Beasor: Preserved Oranges.

Irene Rubenstein: Jaboticaba Pecan Squares,
Almond Bread.

Bea Seekins: Kumquats, Crackers, Apple Juice.

Roma Vaccaro: Carambola.



Jujube

PLANT PROBLEMS by Mr. Lewis Maxwell

Mr. Maxwell began his presentation with a reference to the major and minor elements needed for a plant's growth. He displayed a slide showing a barrel with the barrel staves cut off at different heights. Each barrel stave represents a vital element required for plant growth such as manganese, magnesium, potassium, nitrogen, iron, etc. Filling the barrel represents growth of the plant and it is obvious that the barrel cannot be filled above the level of the shortest stave. In growing a plant we may suddenly note that the leaves begin to yellow a little and we wonder, "What is it?" So we fertilize with nitrogen, phosphorus and potassium and nothing happens to clear up the yellowing. Until you find out what the short stave is, the plant is not going to make it. What may be required are one of the elements that are not in your common fertilizers. Boron, zinc, manganese, etc. which may be obtained from a minor element spray. Frequently spraying will temporarily correct a minor element deficiency. However, deficiencies such as iron, manganese, zinc need to be corrected in the soil. Another item which is very important is the pH of the soil. With an incorrect pH the plant may not be able to utilize the elements that are available in the soil and a deficiency will result. The proper pH for most plants that we grow is somewhere between 5.5 and 6.5. If you have any doubt about your soil and care about your plants, go to the trouble of taking a soil sample. The usual procedure is to remove the top inch of soil which is not characteristic of the remainder and take a slice about 4" deep below that 1". Place it in a plastic bag and take it to your county agent or one of the nurseries that will run a pH test for you.

In Florida, we are subject to aluminum toxicity. Aluminum is not an essential element and it is quite toxic. It is fairly prevalent in our soils and can be devastating in acid soils. Dolomite is an excellent addition to Florida soils because it not only gives you calcium but also magnesium which is probably one of the elements most lacking in Florida soils. Mr. Maxwell showed us a leaf that was turning yellow in a certain pattern which he described as a nitrogen deficiency. In contrast he showed us a slide of a potassium deficiency in a leaf, reddish and curled at the edges. The next slide showed a molybdenum deficiency which is only seen in a couple of types of plants in Florida. It is a relatively rare occurrence.

The next slide showed a plant suffering from an iron deficiency which is more prevalent in alkaline soils. The slide pictured an azalea plant which, like the blueberry, should have a soil pH between 4.5 and 5.5 for proper use of the elements in the soil. Chelated iron is an excellent product for iron deficiency and is certainly worth the money.

The next slide showed a combination of deficiencies, iron and manganese, both of which are worse in alkaline soils. The double deficiencies sometimes makes it difficult to determine what the deficiency is. However, most of the troubles with our plants are caused by ourselves. We use too much fertilizer and burn the leaves; we let the plant get too dry or too wet; we fertilize when the plants are just in bud and they drop the fruit. And in regard to fruit drop, consider the persimmon. Persimmons seem to have a natural tendency to drop their fruit and we don't know why. The Tanenashi is arthenocarthic. It does not require a pollinator to produce fruit. The Hanifuyu is probably the finest persimmon there is but it does require a pollinator which means it must be grown as a companion to the Gailey persimmon which acts as a pollinator. Without the Gailey, you will get no fruit.

The next slide showed a split orange on the tree. This is caused by letting the tree become too dry during the growth stage of the fruit. The tree actually pulls moisture out of the fruit to provide moisture for its tissues and leaves the skin very hard and brittle. When water is again available to the root system, the fruit begins to grow and the hard skin cracks or splits.

The next slide was a leaf brown on the end and green at the stem. The leaves are saying, "root damage". Too much fertilizer on the roots, hoeing around the tree or drying of the roots. When you see this brown tip on the leaves, you can

probably count on root damage causing the trouble. The tree is saying to you, "C'mon, help me."

Mr. Maxwell then began to introduce us to some of the garden insects which we can expect to meet. 80 to 90% of the insects you see in your garden are either doing you no harm or are beneficial. The slide showed a beetle making a meal from an oleander caterpillar. Lewis Maxwell says we should go into the garden and cheer him on.

The next slide showed an insect that will do us a lot of harm. A so-called stink bug chewing on a rose bud which is being damaged and will not open properly.

Mr. Maxwell then showed us a slide of mealy bugs on a plant and a tree infested with snow scale, which is probably the most tenacious and widespread scale in central Florida today. Tea scale on camelia is a very serious pest. Cottony cushion scale, a white scale covering the stems of the plant were shown on the next slide. Mr. Maxwell indicated that 90% of the white scale was the egg sac.

The next slide showed thrips. They are common on crotons and those of us who have crotons have probably seen them. They are very small and you are apt to miss them but you will see the scarring of the tissue and the little black spots of excretia which is quite common.

The next slide showed the white fly and Mr. Maxwell indicated that it is the larva of the white fly that does the damage. The fly can do a lot of damage and cause a lot of trouble. However, we have some very good white fly parasites. Red acetonia is a parasite that lives on the white fly larva.

The next slide showed sooty mold on a citrus leaf. It grows on the excretia from aphids or scale insects and is a result of their infestation. However, the sooty mold does no damage by itself other than coating the leaves and decreasing photosynthesis. Mr. Maxwell suggested the use of oils for control of all scale insects because oils do not damage our friendly insects. He recommended that oils be applied to dormant plants where possible. Diazinon or Spectracide are also excellent scale controls. Another insect control is called Sygon. It is a systemic poison, which means it goes into the system of the plant and poisons the insects that feed on it. Systemics, however, will not kill the large caterpillars that feed on the leaves but several systemics including Sysiston are excellent miticides and aphicides. Several years ago, a new material called Dipel or theracide, among other things, came on the market. This material, when eaten by a caterpillar, paralyzes his gut and ultimately results in his death. The nice thing about dipel is that it may be sprayed on the vegetables which are to be eaten the same day without harm to humans. It attacks only one thing, caterpillars. It won't hurt any of your friendly insects, only caterpillars and is the best caterpillar control on the market today.

There is a little wasp that lays its eggs in the aphid. The aphid will then swell up and turn brown. In two or three weeks the little wasp will hatch and go on about its business of destroying aphids.

Mr. Maxwell then introduced us to what he called integrated pest control. What he was referring to is this. He uses an insecticide that will not kill friendly insects so that he gets the benefit of the friendly insects and still kills his enemies. It is really a combination of good gardening practices, use of a limited variety of special insecticides and integration with beneficial insects a destructive insect parasites for a complete pest control.

He next showed us a slide of aphids and the larva of the lady bug beetle. Both the lady bug and the larva are voracious eaters of aphids. 40 years ago the worst scale insect in Florida was called purple scale. Purple scale existed on virtually every citrus tree in Florida. The University of Florida brought in a tiny wasp

from China where citrus originated. The wasp was a parasite of purple scale and over the intervening years has completely eradicated the purple scale in Florida. It has been estimated that the introduction of this one little wasp by the University of Florida has resulted in a saving equal to the entire budget for the School of Agriculture in all its experiment stations. This is an example of what one little insect can do for an agricultural industry.

The next slide was the Florida red scale which is no longer a serious threat to citrus in the state of Florida. It has been virtually eradicated by another small parasitic wasp that was introduced by the University of Florida.

Mr. Maxwell next showed us a slide of a nematode worm. He stated that possibly the most destructive pest in Florida is the nematode. It attacks a wide variety of trees and annual plants, including many vegetable crops. Frequently, this destruction goes on virtually undetected because it is below ground in the roots. However, the damage shows up in poor growth, poor production and frequently death of the plant. There are several varieties of nematodes that damage plants in Florida. One variety causes the root knot that we are so familiar with but another variety causes entire destruction of the roots. Excellent control of nematodes can be achieved with Vapam.

We then saw three stinging caterpillars including the saddleback and pussmoth, which can deliver rather painful stings if touched.

Next we were introduced to mites. Mites can be rather devastating but we do have a rather good control in Dimention. Plants cannot live with mites. If you have mites, you're going to have to control them.

Next the long-horn beetle. The female lays her eggs at the tip of a tree limb and then cuts the limb loose from the tree where it falls to the ground. As it rots it provides a home for the larva. The way to control this beetle, of course, is simply to pick up all the cut limbs and destroy them. This is an effective control.

Next we looked at rust. It is common on peaches, figs and other fruit trees. The best pest control for rust is probably Diazinon.

Caribbean fruit fly. This insect has very definitely caused a lot of damage to fruit in central Florida. For control he suggested the use of one cube of soluble yeast and a tablespoon of Malathion in a gallon of water to make a poison. This may be sprayed on the fruit trees at least once a week during fruiting time so that it coats the underside of the leaves particularly. This will attract and control the med fly and allow us to eat most of our fruit.

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1985 ELECTIONS

Nominating Committee: Celso Gomez-Sanchez
Armando Mendez
Kay Netscher

Proposed Slate of Board of Directors

Bruce Beasor	Armando Mendez
Joe Constantine	Kay Netscher
Betty Dickson	Irene Rubenstein
Celso Gomez-Sanchez	Paul Rubenstein
Bob Heath	Arnold Stark
Doris Lee	Lillian Stark
Robert E. Lee	Walter Vines

A MESSAGE FROM THE PRESIDENT

To begin with, I would like to thank Lewis Maxwell for a most informative talk. I'm sure everyone left the last meeting with a sense of having gained some practical knowledge, and is looking forward to eating peaches, etc. free of fruit fly larvae. As an addendum to his talk, it is interesting to learn of the extent to which Florida agriculture is dependent upon integrated pest control. Citrus growers in our state utilize parasitic wasps in the control of citrus scale, and realize an annual savings of \$35 million, more than the entire annual cost of I.F.A.S.

I would again like to encourage our members to more actively participate in both our monthly plant drawing and our hospitality table. No matter how hard your board works, what activities and programs we schedule, how informative this newsletter may be, we cannot do it all! Without you, we serve no purpose. If you feel you are benefiting from your membership in our organization, then GET INVOLVED!

We are planning again to participate in the Tampa Botanical Council's activities this spring. We will be joining them in a plant exhibit and sale at Eastlake Square Mall on Friday through Sunday, March 28-30. This is a nice opportunity to sell some of your plants (sales are split 2/3 - 1/3 with the club). If you have any plants to sell, or for our exhibit, or can help man our booth, please sign up at the next meeting.

Speaking of booths, I hope most of you had the opportunity to visit our fabulous booth at the State Fair. Not only was there a nice selection of plants on display, but also a HUGE collection of fruit in 2 display cases. Most of the credit for this exhibit goes to Elizabeth MacManus, who provided the cases and the fruit (shipped from Miami), and did most of the setting up. Welcome assistance, either in setup, manning the booth, providing plants for display, or cleanup, was also provided by Walter Vines, his friend Paula, George Merrill, Betty Dickson, Armando & Felicia Mendez, Arnold and Lillian Stark, Kay Netscher, and Paul & Irene Rubenstein. I apologize if I have omitted any names. To all of you, a grateful thank you. Our booth generated considerable public interest, including several potential members, indicating this should be an annual effort on our part. It also served as good publicity for our annual plant sale.

Soon we hope to receive several seed shipments, mainly unusual herbs and vegetables. If you would like to participate in a cooperate growing effort, in which 33% of plants grown must be returned to the club (for plant sales and drawings), please sign up at the next meeting.

The Board has determined that, in keeping with our bylaws, our dues schedule must coincide with our fiscal year. Consequently, in the future, our dues schedule will run from April through March, and any discrepancies (such as from joining midyear) will be dealt with by pro-ration. All present members must renew their membership prior to April 1, in order to be included in our new Membership Directory.

Last, but certainly not least, it is election time again. Elsewhere in this newsletter is a list of the Nominating Committee's proposed slate of board members. Please attend the next meeting so that you may participate in the election. At that time, additional nominations from the floor will be entertained.

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The Caloosa Rare Fruit Exchange in Fort Myers is hosting an International Tropical Fruit Seminar on October 12 and 13 (Saturday and Sunday). The cost will be \$5.00 per person. Among others, members of both the California and Australia chapters plan to attend. It is important that we also have representation. Please think of attending.

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RECIPE OF THE MONTH

Macadamia Pineapple Crisp

(1983 Frieda of California)

1 fresh pineapple, cut into 1/2 inch chunks
 1 cup shredded coconut
 1 cup oatmeal
 1 cup chopped macadamia nuts
 2 Tbs. brown sugar
 1-1/2 Tbs. minced fresh gingerroot
 1/4 cup butter or margarine
 Vanilla yogurt or cinnamon ice cream

Arrange pineapple chunks in a 12 x 8 inch baking dish. Combine the coconut, oatmeal, macadamia nuts, brown sugar, and ginger. Cut in the butter/margarine. Sprinkle mixture over pineapple evenly, and bake at 350° for 45 minutes. Serve warm or cool with yogurt/ice cream. Makes 8 servings.

NOTE: To crack macadamia nuts, spread on a cookie sheet and place in a 200° oven for 30 minutes. Wrap nuts in a towel, and crack with a hammer on a hard surface. To roast them, spread a single layer of shelled nuts in a shallow pan, and roast for 12 to 15 minutes at 250°. Avoid burning! Salt lightly or sprinkle with cinnamon sugar. Store tightly covered.

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ANSWER TO QUERY: Alexander the Grape concord the known world.

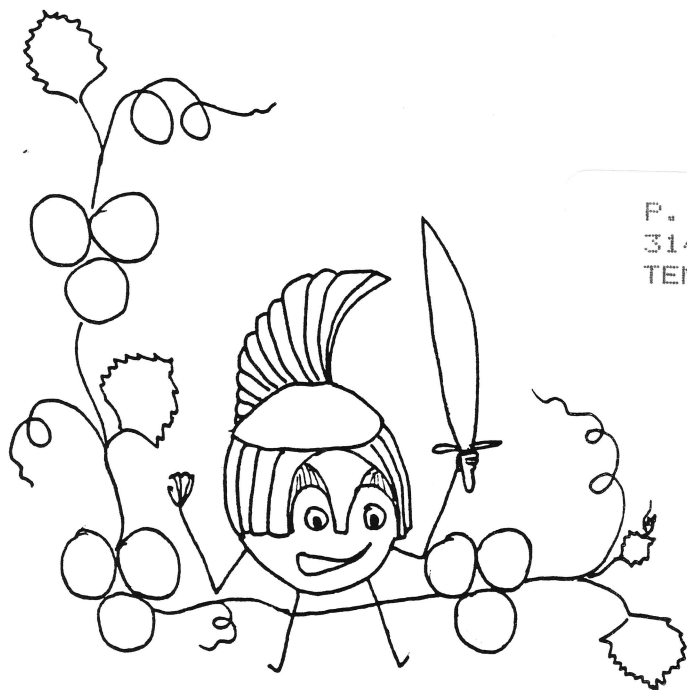
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PLANT RAFFLE - FEBRUARY

<u>Plant Name</u>	<u>Donor</u>	<u>Winner</u>
Grumichama	RFCI	George Merrill
Basil	RFCI	Pearl Nelson
Yellow Guava	RFCI	A. Mendez
Cos	RFCI	A. Mendez
Red Passion Fruit	Stark	Roma Vaccaro
Giant Grenadilla	Stark	Walter Vines
Loquat	RFCI	Mary Victor
Ornamental Banana	RFCI	Pearl Nelson
Lady Palm	A. Mendez	Bill Ryland
Black Sapote	A. Mendez	L. C. Alarcon
Pink Cattleya Guava	A. Mendez	Walter Vines
Bromelie Balansee	Herb Hill	L. C. Alarcon
Yellow Guava	RFCI	H. Seekins
Okinawa Peach	Walter Vines	H. Seekins
Okinawa Peach	Walter Vines	Priscilla Lachut
Okinawa Peach	Walter Vines	Stan Lachut
Flying Dragon Citrus	Bob Heath	Priscilla Lachut

Most of our members are familiar with the Agricultural Extension Service property in Seffner and the effort we have been making to develop an horticultural garden devoted to fruiting plants. But for the benefit of those who have not seen the area involved, an explanation of our efforts is in order. The space to be planted is approximately 320' by 340' and is located behind the contemporary building which houses the Hillsborough County Extension Service offices in Seffner. We have developed drawings showing pathways and other accessories and the location of the trees which we wish to plant. A wooden bridge has been built, a grape arbor and pathways developed. An entire irrigation system is presently in place and waiting for trees to be planted so that it may provide the irrigation. Several plants are available in pots at the Extension office waiting to be located and planted. Considerable effort has been expended by several members over the past couple of years but at present the entire project is at a standstill because the project committee head is presently unable to devote any time to the project. The effort is potentially a very satisfying one for our group. It certainly deserves a considerable amount of devotion by our membership. Those who have seen the gardens in Palm Beach and Miami will attest to the beauty that can be developed by a devoted group. At this point, we are critically in need of a committee head, someone who would be willing to devote one or two days each month to this project, someone who can organize the effort and be there when work is being done. It is not necessary that this person be an authority on fruit trees or someone with a "green thumb". Our members who are willing to work at the project and the master gardeners and Extension Service personnel are well versed in these kind of details and only need someone to organize the work efforts at the project. The present committee head will be available to offer sufficient advice and assistance to anyone willing to expend the amount of energy required to develop a worthwhile project. So give this some thought. Here is an opportunity to get involved with your group and do something significant without a tremendous effort. It can also be a very great learning experience and provide social contacts with others who are interested in the same things that you are. Don't be shy, make yourself ready to volunteer at the next meeting, or better yet, call your president and volunteer tonight. We can guarantee that you will be glad you did. Remember - RFCI wants you.

TAMPA BAY CHAPTER NEWSLETTER
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