RFCI

NEWSLETTER

FEBRUARY 1987

TAMPA BAY CHAPTER of the
RARE FRUIT COUNCIL INTERNATIONAL, Inc.

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(INCLUDING RENEWALS)

MEETINGS ARE HELD AT 2:00 P.M. ON THE 2nd SUNDAY OF EACH MONTH.

NEXT MEETING . . . . . FEBRUARY 8, 1987

MEETING PLACE . . . . . COMMUNITY ROOM UNDER WEST RAMP, TAMPA BAY CENTER SHOPPING MALL, BUFFALO & HIMES AVES., NEXT TO TAMPA STADIUM. (TAKE DALE MABRY TO BUFFALO AVE., AT STADIUM.)

PROGRAM. . . . . LEON HEBB, the assistant Bureau Chief of Pest Eradication & Control in the Division of Plant Industry, Florida Department of Agriculture and Consumer Services, speaking on the Prognosis for Citrus Canker in Florida and how it affects homeowners' future for citrus.

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A MESSAGE FROM THE PRESIDENT

For all of us, I would like to extend a hearty thank you to Sydney Parke-Brown for a practical program on fertilizers. I am sure all of us will now spend more time reading package labels, and understanding them (for a change). Our plants, not wanting to be leaft out, also thank you.

As you can see, our next program deals with citrus canker and the status of citrus in Florida. This is an important topic, and I hope you will attend. I know some of our members feel that citrus is too mundane for us to consider, that we should be concerned with only "rare" fruits. While it is true that the latter is our emphasis, most of us do grow some citrus (some of us grow a lot), they are subtropical plants, and there are many rare and unusual varieties (between canker, land development, and freezes, all citrus is becoming rare, at least locally).

I hope by our next meeting to have some more information for you concerning our proposed field trip to Homestead. There will again be a sign-up sheet available at the next meeting. I guess that's all for now.

See you at the next meeting!

* * * *

FERTILIZER by Sydney Parke-Brown

Sydney started her presentation of fertilizers with a discussion of the nutrients that plants need for growth and reproduction. She showed us a mnemonic that will facilitate remembering the 16 elements that plants need, carbon, hydrogen, oxygen, phosphorus, potassium, nitrogen, sulfur, calcium, iron, magnesium, boron, manganese, copper, zinc, molybdenum and chlorine. The mnemonic goes C Hophman's Cafe, Managed By Mine Cousin Mozell. It's silly but it will help you remember the elements if you can just learn the words. A deficiency in any one of these 16 will cause a plant to show an abnormality. The carbon, hydrogen and oxygen come from the air and water, the atmosphere, the environment. Potassium, phosphorus and nitrogen normally come from our fertilizers, although, of course, these elements also exist in the environment. These are what we call the primary nutrients, the macro nutrients because plants require these three in large amounts. The secondary nutrients are sulfur, calcium and magnesium, which plants need in lesser amounts than the primary nutrients. The remaining elements are what we call micro nutrients, or minor elements, even though their requirements are not minor. They are called the minor elements because a plant needs such small quantities, but a deficiency in any one of them will show up as a deficiency in the plant's growth. The micro nutrients are iron, boron, manganese, copper, zinc, molybdenum and chlorine.

Sydney's slide presentation is intended to teach how to shop for fertilizers, how to determine when a specific nutrient is required, what pH means and how to adjust it. It may be overwhelming when you try to buy fertilizer at the garden center today. They'll have five or more types of fertilizer on the floor or in the yard, special this and special that, with all kinds of prices; it's hard to know just what to buy. In addition to that, you get sales pitches on the fertilizer bags themselves with "100" organic" or "complete fertilizer", "made for Florida mix" "contains micro nutrients", etc., which just confuses you even more. So what do we end up doing? We buy the cheapest thing and walk out the door with it. $3.99 K-Mart special or whatever. This program should change that and clarify some of these confusing items and teach how to read a fertilizer tag and what we're really paying for. Fertilizer information is always on the bag, either printed on the bag itself or on a tag attached to the bag. Every fertilizer sold is required by Florida law to have an analysis of the fertilizer displayed on the bag.

Complete fertilizer. A complete fertilizer always contains nitrogen, phosphorus and potassium in that order and this is all that "complete fertilizer" means, simply that it contains these three ingredients in some specified amount.

Balance. Another term which you hear and see written frequently is balance. Balanced fertilizer is simply one in which the nitrogen, phosphorus and potassium are in equal amounts, such as a 6-6-6, 8-8-8, etc. These terms are neither good nor bad, they just indicate the contents of the fertilizer.

In an analysis of fertilizer, phosphorus is always expressed as available phosphoric acid. The potassium is expressed as soluble potash. But nitrogen may be in four different forms. It may be expressed as nitrate nitrogen, which is the most soluble form of nitrogen, one which the plant may begin absorbing immediately. Ammoniacal nitrogen is not so soluble and is slower to be absorbed because it must be converted into nitrate nitrogen, which is the only form that plants can absorb. Ammoniacal nitrogen must be converted by micro organisms to the nitrate form which may take from one to four weeks. Water soluble organic nitrogen is urea, which is an organic compound, although it may be produced in laboratories. Water insoluble nitrogen is what we fine in bone meal, sludge, tankage and other truly organic materials. The nitrogen in these is very slowly available to the plant because micro organisms first have to convert them to urea, then to ammoniacal, and then to nitrate. Another thing about the analysis of fertilizer to be aware of is the analysis, such as 6-4-6. The analysis is percent by weight. So the 6 for nitrogen indicates 6% by weight or six pounds of nitrogen for each 100 pounds of fertilizer. The 6-4-6 indicates 16 pounds of major nutrients per 100 pounds of fertilizer. So we get 16 pounds of plant food in 100 pounds of fertilizer. What is the other 84 pounds? Are we being

ripped off? Not really. The remaining 84 pounds is what are called conditioners and fillers. They are there to make the plant food more easily usable. The fillers help to make the plant food more easily spread in an even, homogenous manner. The conditioners help keep the fertilizer from hardening in the bag, a condition which I am sure all of us have experienced. Fertilizers absorb moisture out of the air and like cement, will set up at a certain moisture content. The conditioners help prevent this from happening nearly as rapidly. You also may have experienced the situation where we have placed fertilizer on the surface of the ground and two months later found it still there, not having been absorbed by the plants at all. What we are seeing in this case are the fillers and conditioners. The actual plant food has long since been leeched into the ground, absorbed by the plants or passed on into the lower soil strata.

To add to all the above fertilizer confusion, there is a term called "organic". You see it on fertilizer bags all the time, like "100% organic". Most people, when they hear the term "organic", think of animal manure or other organic plant material. However, urea is an organic compound but it's usually produced in production laboratories. Florida law requires that the fertilizer manufacturers indicate on the bag what percent of urea is synthetic or manufactured and what comes from natural sources, such as sludge, tankage, manure. Synthetic organic urea refers to manufactured urea.

To further complicate the fertilizer dilemma, we now have fertilizers which are called slow release. These are products which have come on the market recently in the last 10 years or so and they're called encapsulated products. Probably the best known is called Osmacote. It has a resin coating encapsulating the fertilizer. The fertilizer moves through the resin coating very slowly and becomes available over an extended period of time.

Another item on the fertilizer tag is the list of secondary plant nutrients, where the secondary nutrients such as sulfur and calcium will be listed in addition to the micro nutrients or minor elements. This is critical because the fertilizer with the secondary nutrients contains the extra little goodies that plants need in addition to the primary nutrients.

The last item to take particular note of is the amount of chlorine, since some plants are particularly sensitive to chlorine. We should be aware of these plants and use fertilizer with low chlorine content if we're fertilizing these kinds of plants. Roses are one of the plants that are particularly sensitive to chlorine and should be fertilized with a fertilizer that is low in chlorine.

Nutritional deficiencies. So if we have a plant that is obviously suffering from a deficiency of some element, we probably think first of a nitrogen deficiency because our crummy old sandy soils will not hold on to anything and the nitrogen is quickly leeched out. Plants need a lot of nitrogen and nitrogen being so soluble and easily leeched out by rain or watering, we see a lot of nitrogen deficiency.

A deficiency in any of the primary or secondary nutrients will make its presence known in the older foliage rather than the new. If the older leaves of the plant are showing a premature yellowing, you know it's a deficiency in the primary or secondary nutrients. Nitrogen deficiency is normally an overall yellowing of the leaves. Magnesium deficiency will show up as yellowing between the stem and veins on the leaves while the veins remain green. Palm trees and plants that produce a lot of fruit at one time, particularly fruit with lots of seeds, such as the Duncan grapefruit or Navel orange, are particularly subject to magnesium deficiency because it takes a lot of magnesium to produce the seeds. Deficiencies that show up on the new growth indicate a micro nutrient deficiency, iron and magnesium being the most common. Deficiencies can be corrected by the addition of chemicals high in the missing elements; sodium nitrate for nitrogen deficiencies, magnesium sulfate or epsom salts for magnesium deficiencies, chelated iron for iron deficiencies, and so on, will correct the problems if we have proper Ph and there is no major root damage

And this brings us to one of the other things that contribute to nutrient deficiencies - the Ph of the soil. If you use a good fertilizer with all the major elements and minor elements and your Ph is too acid or too alkaline, the nutrients will not be absorbed by the plant because high or low Ph prevents the nutrients becoming soluble where they can be absorbed. So if the Ph is not correct, the plant will not be able to absorb the nutrients from the soil. Ph is expressed on a scale of 0 to 14 with 7 being neutral. Anything below 7 is acid or what the old timers call sour. Anything above 7 is alkaline or sweet. Most plants grow best in a range from 5.5 to 5.6. Blueberries and azaleas, of course, are exceptions to this general rule because both like a soil that is very acid. To determine the Ph of your soil, unless you have testing equipment of your own, take a soil sample and bring it to the County Extension Service, where it will be tested for $1.00. Ph tests are run every Friday and the results are mailed to you. To take a sample, you should make a cut from the surface down to about 6", collecting soil for that entire depth, in several places throughout your yard if you want a general Ph or in one location if you are concerned about a specific location. Only a small amount, a cup or so, is needed. If your soil is acid, below 5.5, it needs to be raised, which is normally done with calcium or lime. What we normally recommend is dolomite because dolomite contains magnesium in addition to the calcium. Above 6.5 we recommend use of sulfur to acidify the soil. A high Ph in the soil may be caused by the use of well water which is brought up from a limestone aquifer, limestone, of course, being very alkaline. Shell or concrete in your soil will also produce a high alkaline condition.

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Plant Raffle:January 1987

Plant Name	Donor	Winner
Papaya	A. Mendez	B. Puls
Papaya	A. Mendez	Walter Vines
Black Sapote	A. Mendez	Betty Dickson
Carambola Fruit	Bruce Beasor	Nels Gullerud
Surinam Cherry	Bruce Beasor	Cornwell
Rosemary	Betty Dickson	Linda Lee
Chayote	L. Shipley	A. Mendez
Chayote	L. Shipley	Bob Heath
Chayote	L. Shipley	Joan Murrie
Chayote	L. Shipley	Stan Lachut
Chayote	L. Shipley	Bruce Beasor
Chayote	L. Shipley	Theresa Heath
Chayote (2)	L. Shipley	?
Bird Pepper	RFCI	Bruce Beasor
Papaya	RFCI	Walter Vines
Macadamia	RFCI	Walter Vines
Nectarine (Sunred)	RFCI	Bruce Beasor
Carambola (big)	Heath	Pearl Nelson
Carambola (small)	Heath	J. Murrie
Guava (yellow)	Heath	A. P. Lima
Guava (yellow)	Heath	Nels Gullerud
Pineapple	Heath	Helen Cornwell
Camphor Tree	Olga Blaha	Betty Dickson
Pomegranate	Nels Gullerud	Newcombe
Surinam Cherry	Nels Gullerud	L. Shipley
Papaya	Helen Cornwell	MacManus
Papaya	Helen Cornwell	Linda Lee

The following is an excerpt from a 1981 Newsletter which we considered would be of interest to all members who have joined since 1981.

FRUITS FOR CENTRAL FLORIDA

Subtropical Fruit Fact Sheet #1

submitted by R.S. Thorndike

Genus & Species:
Casimiroa edulis
Family: Rutaceae
Varieties: Dade, Harvey, Maechtlen, Parroquia, Gillespie

Common Names: White Sapote
Casimiroa
Mexican Apple
Matasano

This medium sized, open growing, evergreen tree is native to the Mexican and Central American highlands. ALthough it is a citrus relative, it has resisted attempts to hybridize and graft with citrus species. Definitely subtropical in climatic requirements, it has been successful in south and central Florida and also southern California.

Sometimes erect but usually of spreading form to 30 feet in height and to 30 feet in width, trees should be planted at least 20 feet apart. The irregular branches have glossy medium-green palmately compound leaves with five to seven leaflets. The rough grayish bark is covered with conspicuous lenticels (small whitish excrescences).

The prolific flowers, small and pale green, are brone in panicles of 15 to 100 each, followed by literally hundreds of fruits on mature trees. In central Florida flowering occurs from December to March and even to September on girdled wood. Fruits begin maturing in May and may continue until November.

The tomato-to-orange-sized fruit, 3 to 4" in diameter, is green in some varieties, yellow or golden in others, sometimes with a streak of bright orange or yellow. The thin membranous skin is inedible; the off-white to yellow flesh soft, with the texture of butter, agreeably sweet to the taste in the better varieties. Some varieties leave a slightly resinous or bitter flavor in the mouth. There are from one to six rather large oval or elliptical seeds embedded in the center. Historically the raw seeds have been regarded as poisonous, but used in preparations of medicine. Rich in vitamins C and A, the Casimiroa is a dessert or salad fruit to be eaten fresh. A sweet preserve has been made but never achieved much note. Also rich in carbohydrate and protein, Casimiroa fruit is ranked next to the banana, date, and fig for food value, pound for pound. With cream and sugar some prefer it to the banana similarly prepared.

The fruit may be picked when mature but not fully ripe, as it will then ripen indoors with little loss in flavor. If left to ripen on the tree it will drop. It does not lend itself to commercial exploitation unless picked early while still hard and shipped rapidly to arrive before softening.

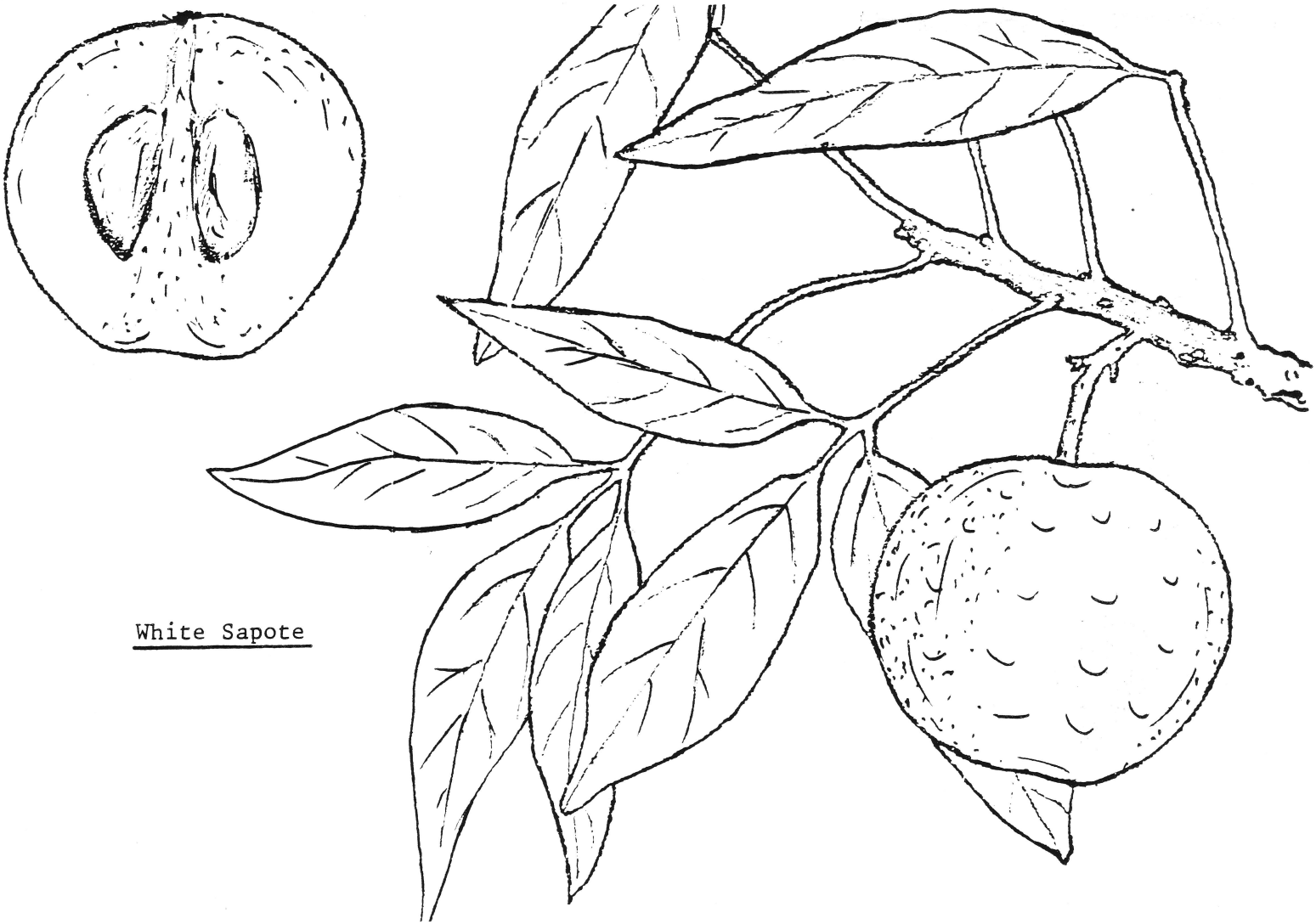
Climatically the Casimiroa seems to be as hardy as most citrus. In the central Florida freezes of January 1977 and March 1980 mature wood survived. There was extensive defoliation and some tip damage, However, total re-foliation accompanied by rapid new growth took place in a matter of weeks. 28^{o}F will cause damage to young foliage. 25^{o} to 26^{o} or lower will cause extensive defoliation. Naturally, young trees are much less tolerant. Unfortunately, the normal flowering season coincides with the freeze danger period in central Florida. Should a freeze destroy the flowers and/or young fruit, flowering may be induced later in the year by girdling selected branches.

This tree prefers a slightly acid rich loamy soil. Alkaline soils cause severe mineral deficiencies. A generous amount of compost should be added to planting holes in deep acid sandy soils. With good drainage it may be grown on clays. Low wet woils discourage fruiting. The mature tree is drought resistant but responds to irrigation like citrus. Young trees need plentiful water for rapid growth. In mature trees, cool dry winters seem to indue a better dormancy and improve the fruit set. Thus water should be withheld during dormancy, within reason (i.e., except for extended drought periods). Salt tolerance is only fiar, not encouraging to seaside plantings. Select varieties of Casimiroe are propagated by grafting, budding and air layering. Seedlings do not come true to the parent and are highly variable. Also, seedlings require at least seven to eight years to bear.

Due to a short period of viability, seeds must be planted soon after removal from the fruit. Plant one inch deep in a light porous soil mix. Germination takes three to four weeks. If seedling Casimiroa trees are grown, the terminal bud should be removed before the plant reaches three feet in height. Otherwise, the tree may grow ten feet or more before branching. Three or four laterals should be encouraged and they in turn should have their terminal buds removed when one to two feet in length.

The Casimiroa is extremely easy to air layer. The only difficulty is that this practice induces flowering and fruiting on the affected branch. Then one must choose between the fruit or the prospective plant.

Shield-budding as is practiced on avocados is one common method of vegetative propagation. The seedling understock should be about 3/8" in diameter at the base. Branch ends of fairly mature wood which has acquired the ash-gray coloration is suitable for budwood. Spring and summer is best, being the period of most active growth.



White Sapote

Another variety or species is referred to as the Woolyleaf White Sapote (Casimiroa tetrameria in some literature). It has larger leaves rough to the touch on the underside; young leaves and shoots being slightly pubescent. The yellow fleshed fruit of the propagated varieties of Woolyleaf is said by some to be superior in flavor to that of the smooth leafed varieties.

Deserving of much wider distribution as a dooryard fruit, the Casimiroa also needs more study and development. The tree's hardiness permits the central Floridian to confidently grow another fruit strictly tropicaly in character (i.e., soft and sweet). In fact the tree should be more rewarding in central than southern Florida due to the improved dormancy resulting from colder, drier winters. Being evergreen and a good ornamental subject it should find a place in most any landscape scheme. The Casimiroa also has potential as a pot plant (tub culture) and as an espalier specimen (trellis, fence, wall).

Bibliography:

Popenoe, Wilson, Manual of Tropical and Subtropical Fruits, MacMillan, 1920
Sturrock, David, Fruits for Southern Florida, Southeastern Printing, 1959
Simmons, Alan E., Growing Unusual Fruit, Walker & Co., 1972
Maxwell, Lewis S., Eric V. Golby & Albert A. Will, Florida Fruit, 1967

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The following note comes from Tom Goldsworthy:

ORGANIC GROWERS INVITED. If you are an organic grower or gardener and would like to learn more about the newsletter and activities of the only viable organic growers group in the Southeast, you are invited to join the Georgia Organic Growers Association (GOGA).

Membership is $15.00 per family, or $35.00 for a company or sponsor; $10.00 for individuals; and $7.00 for students or retired people.

I have been a member for one year now, and recommend GOGA and its newsletter to serious organic gardeners in Florida.

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HOSPITALITY TABLE:

Priscilla Lachut: Blueberry Muffins
Bea Seekins: Date Cake, Apple Bars, Kumquats
Alice Beasor: Blueberry Buckle
Lottice Shipley: Molasses Tea Cake
Irene Rubenstein: Stuffed Figs

RECIPE OF THE MONTH: SOUR CREAM APPLE BARS (Bea Seekins)

Combine 1 cup brown sugar with 2 cups flour. Cut in 1/2 cup butter.
Take 2-3/4 cups of the mixture and press into a 13 x 9 pan.
To remaining crumbs add 8 oz. sour cream, 1 egg, 1 tsp. vanilla, 1-1/2 tsp. baking soda, 1/2 tsp. salt, and 2 tsp. cinnamon. Beat. Fold in 1 cup chopped pecans and 2 cups chopped apple. Pour over the crust in the pan.
Bake for 35 minutes at 350.

From the Florida Market Bulletin, December 1, 1986:

STRAWBERRY FIELD DAY SET FEB. 11 AT DOVER STATION

The Florida Cooperative Extension Service & the Agricultural Research and Education Center at Dover, Fla., will hold a strawberry field day February 11, 1987. according to W.E. Waters, director of the Bradenton AREC.

The program will begin at 1:30 p.m. and conclude with tours of research plots at Dover.

During the afternoon, Dr. J.M. Davidson, dean of research for the Institue of Food and Agricultural Sciences, will present an overview of IFAS research programs.

Speakers include Mrs. A.J. Overman on nematode research and Drs. J.F. Price on insect management, J.P. Gilreath on weed control, C.D. Stanley on water requirements, G.A. Clark on recycling irrigation water, C.M. Howard on varieties and diseases, and E.E. Albregts on nutrition and culture.

* * * *

What is green and makes pretty music?

Answer: A pickle-o.

What is round, orange and is good for making sandwiches?

Answer: Pumpkinickle.

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