

The Fruit Growers of Southwest Florida

OCTOBER 2019



Doctor Noris Ledesma will talk about the past, present and future of avocados in South Florida. Before finding the way to Florida, avocados had a long journey. She will provide some tips to grow avocados in your backyard.

Dr. Ledesma is a horticulturist specialist in tropical fruits. She has an educational background in Tropical Fruits and Economy, Forestry Engineering, with work experience throughout Latin America, Asia, Indonesia, Malaysia, Africa, and India. She is an Emeritus Curator at Fairchild Tropical Botanic Garden, a courtesy professor at the University of Florida, Tropical Research and Education Center, Homestead FL, and an Adjunct Researcher at the United States Department of Agriculture-ARS SHRU (clonal germplasm repository United States), Miami, FL.

Her collecting and research of *Mangifera* [mango] species is well known worldwide. Her work has been recorded in The Fruit Hunters movie.

Awards: Florida State Horticulture Society President Industry Award, June 2018.

Florida State Horticulture Society Outstanding Commercial Horticulturist Award for having made significant contributions to the commercial Horticulture in Florida, June 2017.

Florida Magazine Association, The Charlie Award for the Best Service Feature for the Tropical Cuisine Column, 2007 and 2008.

Books: For the Love of Mangos-India, (2008), Miami Children Hospital Foundation. 2008. "*Miami Flavors: Our City's Culinary Point of View"*, Miami Florida. A Quick Guide of Mangos (2005), The Exotic Jackfruit: Growing the World's Largest Fruit (2003); and Mangos: A Guide to Mangos in Florida (1992). She is a contributor to the Miami Herald.

She has authored over a hundred scientific and popular articles on fruit culture in the last decade, as well as coauthor of three books, and numerous scientific publications and popular articles.



Collier Fruit Growers Meeting: TUESDAY, October 15th. The tasting table starts at 7:00 pm. The meeting starts at 7:30 pm at the Tree of Life Church, Life Center, 2132 Shadowlawn Dr., Naples, FL



Jessica Mendes Ryals will address the Bonita Springs Tropical Fruit Club on Tuesday evening, October 8. Jessica is the Sustainable Food Systems/Agricultural Agent for Collier County UF/IFAS Extension. She develops food system educational programs that focus on farm food production, processing, distribution, regulation, safety and collaborates with producers, small-business owners, citizens, and industry members to strengthen access to a local/regional food system.

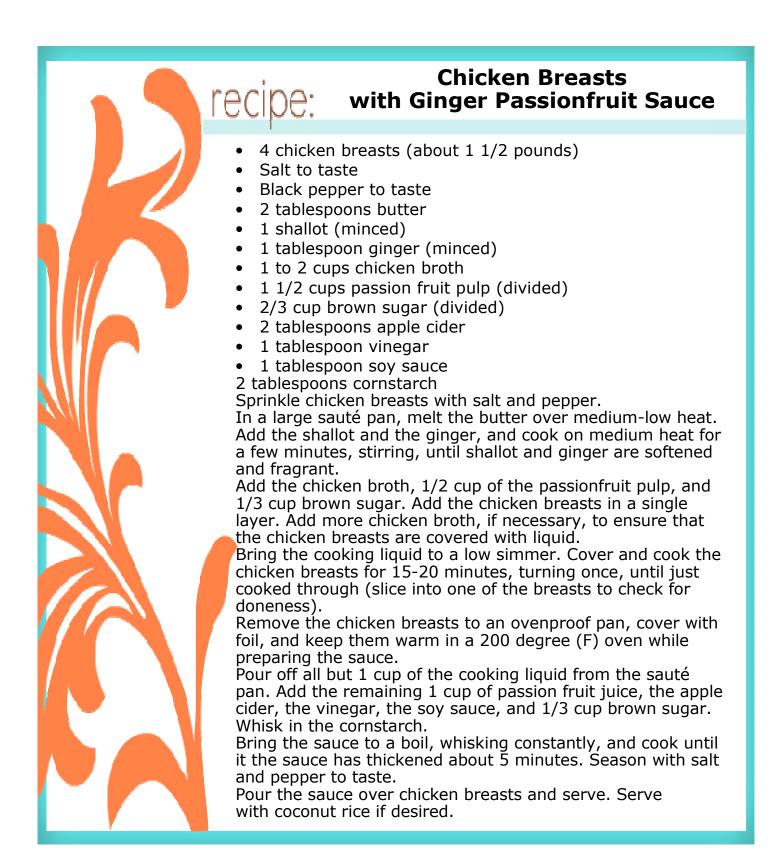
Jessica will go over the Florida Cottage Food Law and show growers a few ways to sell their fruit-related products under the cottage food law. She will also demonstrate the use of a dehydrator and the making of making jams.

-- Please bring your ripe and frozen fruits for Jessica to use in her presentation. --

Bonita Springs Tropical Fruit Club Meeting: Tuesday, October 8th. Tasting Table Begins at 6:15 pm. Meeting Starts at 7:00 pm. Revive Magazine, 28410 Bonita Crossings Blvd. #11, Bonita Springs, FL 34135

RECIPE OF THE MONTH:

Although passionfruit is usually used in dessert recipes, it can also be used in main dishes. This recipe by Marian Blazes was found on <u>www.thespruceeats.com</u>. It pairs passionfruit with ginger and chicken to make a sweet and savory dish that is sure to become a family favorite.



<u>Star King' Carambolas and Ana' Apples in Costa Rica</u> By Crafton Clift

Our rare fruit group of eighteen were at EARTH University in Costa Rica in late July 2019. We had been enjoying mangosteens and rambutans, but when our guide said he was going to fetch us some carambolas, the group was totally disinterested. We all have more carambolas than we can handle in Florida. Our guide returned with one large carambola he called 'Star King' and three smaller ones he didn't identify, possibly 'Fwang Tung.'

EARTH University didn't exist when those carambolas were introduced by the Rare Fruit Council, Miami (RFCI) to Bob Mack, association ANAI in Costa Rica. In 1979 RFCI sent Dr. Robert Knight, horticulturist, USDA, Miami to Thailand and he ushered in a new era with the sweet 'Fwang Tung' carambola. Seeds were distributed and a year later the fivefoot seeding planted by Morris Arkin collapsed to the ground from the weight of the fruit. That seeding was named 'Arkin' and although it wasn't as sweet as the 'Fwang Tung' is made RFCI member Joan Green a millionaire in a couple of years. They fruit eight months a year!

Morris Arkin had another seedling called 'Star King Sweetie.' All of his seedlings have his name in the middle of their name.

RFCI announced: Everyone bring fruits of your seeding carambolas to the meeting next month and we will have a tasting contest (We had about 200 attendees at the Museum of Science in the 1970's – 1980's). I was on the tasting panel and I thought 'Hart' was the easy winner. (The prolific Brazilian horticulture writer Hari Lorenzi mentions 'Hart' as the best tasting carambola.)

Next day I went to Vernon Hart's for scions and we had a large tree in the USDA, Miami, RFCI plot. I never saw a single fruit or flower on that tree.

Things have changed. I was hired by RFCI to work at the USDA plot, our own greenhouse with 'Samoan' breadfruit, two or three dozen volunteers on Saturdays and a ten week long grafting class with unlimited rootstocks.

I mailed grafted mameys to Australia three times before their fragile bare roots survived. Forty years later I saw how beautiful the trees we sent to Tenom Saboh in Borneo had become and they were asking how to tell when they are ripe and how to eat them. More than two dozen duffle bags of grafted fruit trees were hand carried from Miami to ANAI (Gondoca farm on the eastern Panama border near Bribri). The Asian fruits – black pulasans, *Artocarpus lasiocarpus*, mangosteens, durians, were brought to Gondoca by Costa Rician, Peter Aspinal, who was Professor Al Will's tropical student at Broward Community College. Peter's grandpa came from Ireland and put the railroad to Cartago to get Costa Rica's coffee harvest out to Europe. Peter has 3,000 acres of tropical fruits, jaguars, and white-faced monkeys on the western Costa Rician border with Panama, south of Golfito where you can ride a surfboard a mile.

I took an air layer of 'Samoan' breadfruit to a retired US military guy in Costa Rica, knowing it would not to be frozen there, but not knowing it was high enough altitude that it would never get warm enough for photosynthesis to kick in. Five years later I expected the tree to be fifty-feet tall and wide, but it didn't appear to have grown an inch. Costa Rica's various heights and rainfalls make it possible to grow a wide variety of fruits. They try to grow mangos in Guanacaste and the west but in the markets the seed borers render the fruits very unappealing.

There were lots of 'Ana' apples in the markets. 'Ana' and 'Ein Schemer' are low chill apples from RFCI member Dr. Gazit from Israel. The pollinator 'Dorsett Golden' came from Bahamas.

Mrs. Dorsett told her gardener to cut that apple tree. It is never going to bear here. The gardener reported, "Missie, it's got fruit on it."

Apples in sunny climates can be very sweet, but often ugly. Dr. Mohmmed Ahmed in Cairo, at the edge of his mango grove has an 'Ana' apple with mostly broken branches from eager harvesters.

Pathology vs. Nutrition

International Ag Labs recently conducted our 10th Annual Field Day. We were pleased to host Dr. Don Huber as our main speaker. I enjoy picking up and dropping Dr. Huber off at the airport since it allows me 2 hours of captive conversation. Naturally I try to learn as much as I can. :)

Dr. Huber, as a world-renowned plant pathologist, has extensively studied plant diseases on virtually all commercial crops all over the world. He has authored numerous scientific articles and helped edit a number of books including Mineral Nutrition and Plant Disease.



Dr. Huber has extensively studied the chemistry of glyphosate and other herbicides. These herbicides have very specific effects on mineral availability and enzymatic processes in plants. He has observed how missing or inhibited minerals creates susceptibility to disease.

The reason I have such a high respect for Dr. Huber is because as a scientist he is intellectually honest. His quest is to get to the foundational cause of disease. Not put a Band-Aid on the problem and develop yet another crop protection product to mask the problem and enrich agribusiness.

Since I only study nutrients in soil, plants, and fertilizers I try to learn as much as I can from Dr. Huber. So, my big question the other day was this:

Are there any plant diseases that don't have an underlying mineral deficiency or imbalance?

The answer was vague, but it appeared to be probably not. This led to a discussion of what actually triggers plant disease. Here is the best way I can explain it,

A Pathogenic Organism, possibly with a support vector + Biotic Stress + a Mineral Deficiency = Plant Disease.

With that definition I followed up with my earlier question:

Then are all pathologies related to a mineral deficiency or imbalance?

Perhaps...but we don't yet know the triggering deficiency for all plant diseases. Still a little vague. I decided to ask my question differently since I am not always the sharpest knife in the toolshed.

When you encounter a new disease do you look for a mineral deficiency to correct the problem?

• Yes, that is how I approach it.

Boom-I got my answer!

Dr. Carey Reams said it this way: "All disease is the result of a mineral deficiency." Dr. Linus Pauling emphasized the same message: "You can trace every sickness, every disease, and every ailment to a mineral deficiency."

I was surprised to find out something else from Dr. Huber. In the 1960's Dr. Huber was a student at Michigan State University. During that time, he worked with S.H. Wittwer and Dr. H.B. Tukey who conclusively proved that foliar feeding of plant nutrients really works.

They found that foliar feeding plants provided 95% efficiency compared to 10% efficiency when putting the same nutrients on the soil near the plant roots. Using radioactive isotopes and a Geiger counter they also discovered how fast nutrients move once inside the plant: 1 foot per hour.

The work of Wittwer and Tukey profoundly influenced the work of another young scientist: Dr. Carey Reams. Dr. Reams later went on to teach a good number of classes in the 70's and 80's on foliar feeding plants after using it for many years in his agricultural practice.

Those classes, team taught with Dan Skow, laid out the core principles International Ag Labs uses today when formulating and recommending the use of foliar sprays.

When the core principles are followed foliar sprays work—when not followed foliar sprays are hit and miss at best.

Here is today's important question.

Can we use foliar feeding to overcome plant pathology?

• I believe we can because it has been done many times before.

When it comes to foliar spraying minerals, I find 2 methods effective.

1. A General Foliar Spray Program

A Specific Foliar Spray Program

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General Foliar Spray Program

In the general foliar spray program, we look to plant physiology to see what the general nutritional requirements are. Let's use soybeans as an example.

- We know soybean plants want to make soybeans.
- We know certain minerals and foliar formulations promote blossoms, pod set, and increased yield.
- We know most soybean plants need extra zinc, manganese, and other trace minerals.

• We know soybean plants begin their reproductive phase as the daylength begins to shorten. We know silicon and humates work together to improve plant health and leaf efficiency. Therefore, a general foliar spray program for soybeans could be:

Foliar Spray #1

Foliar Spray #2

- 1 quart Bloomit
- 1 quart Bloomit
- 1 quart WayAhead 7X
- 2 lbs. Dextrose
- Water as Needed
- 1 quart WayAhead 7X
- 2 lbs. Dextrose Water as Needed

Foliar Spray #3

- 2 quarts Black Silica
- Water as Needed
- Note: Spray frequency is 2-3 weeks between applications. **Amounts given on a per acre rate.** This general spray program would help increase yield and health in soybean plants. In many cases it would shut the door on pathological attacks by providing needed minerals.

Specific Foliar Spray Program

A specific foliar spray program is typically constructed after running a plant tissue analysis. If certain minerals are low in the plant tissue they can be applied through foliar sprays. For example, Iron chlorotic soybeans can be sprayed as follows:

Foliar Spray 1X per Acre:

- 1 pint WayAhead Iron
- 2 lbs. Dextrose
- Water as Needed

Another example is copper. When copper is low in plants it can lead to fungal susceptibility. To provide copper:

Foliar Spray 1X per Acre:

- 1 pint WayAhead Copper
- 2 lbs. Dextrose

Water as Needed

In Summary

By using foliar sprays, we can provide plants with trace minerals in a highly available form with great efficiency. Only a few lbs. of product are enough to cover an entire acre. By using a general foliar nutritional program, we can help prevent pathologies from developing. By using a specific foliar program, we can address known deficiencies and possibly mitigate an active

By using a specific foliar program, we can address known deficiencies and possibly mitigate an active pathology. And that is a very powerful tool in your toolbox.

Jon Frank

International Ag Labs Jon.Frank@aglabs.com (507) 235-6909 - Business www.aglabs.com

PS: The second resource is a class Dr. Huber and I taught together in Tifton Georgia. I taught the principles of Feed the Soil, Feed the Plant, Feed the Leaf to commercial vegetable producers and Dr. Huber taught on the subjects of disease-mineral interactions and pesticide-mineral interactions. He ended his presentation with a poignant call to reform farming for the sake of our children and posterity. Here is the link for further information. Feed the Soil - Feed the Plant - Feed the Leaf

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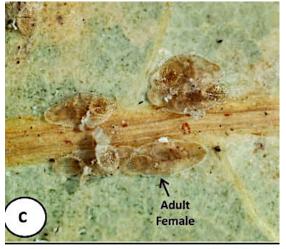
Newly Identified Pests to Watch For By Doug Caldwell





Symptoms of the Lychee Erinose Mite





g-1. (1a) Infestation of lychee leei scale, Thysanofiorinia leei

Unique leaf symptoms and Lychee Leei scale (Thysanofiorinia leei)





Symptoms of the Lebbeck Mealybug (*Nipaecoccus viridis*) (Hosts are citrus, hibiscus, mango, tamarind, jujube)

Continued.....

Red Bay or Laurel Wilt Disease



FIGURE 3

Laurel wilt external symptom development on redbay: (A) Browning of foliage and wilt of localized portions of the upper crown; (B and C) complete crown wilt with attached leaves. Photos by Marc A. Hughes, University of Florida.



FIGURE 6 Redbay ambrosia beetle (*Xyleborus glabratus*) natal gallery in redbay tree with adult beetle

Beetle boring activity.



Saw-dust resembles cigarette ash.

Redbay Ambrorosia Beetle (Xyleborus glsbratus) Identified in 2014

- Bark beetle spreads fungal disease which blocks the tree's vascular pipeline.
- Also kills Avocado Trees.
- Disease kills two native Persea species, and possibly sassafras further north.

Plant Identification- how to distinguish between laurel oak and swamp bay



Waxy underside & purplish petioleLaurel oak (Quercus laurifolia)Swamp bay (Persea palustris)

GARDEN NOTES

Eric Bina reports that in addition to the Asian Eggplant grafts, perennial eggplant (*Solanum torvum*) seems to be working fine for grafting tomatillos (*Physalis philadelphia* and *Physalis Ixocarpa*), for year-round crop production. [See photo on left, below] Crafton Clift has said that the perennial eggplant rootstock can used to graft tomatoes and even potatoes, as well. Refer to the video from the RFCI Archives (starting at 27 minutes, 17 seconds), which was recorded by Ian Maguire, February 2007, and is posted on the internet at:

https://drive.google.com/file/d/1Bcj1TQ8AMzHfnsNohuQ4yzVErZJkdDow/view?usp=sharing

Rodger Taylor reports that a Black Mission fig (*Ficus carica*) scion was successfully grafted onto a sycamore fig (*Ficus sycomorus*) rootstock, which started sprouting new leaves within ten days. [See photo on right, below] You may ask why anyone would want to graft figs. The answer is that many of the varieties that UF/IFAS have identified as suitable to Florida are attacked by certain nematodes which are common in the sandy soil of Southern Florida. By grafting them onto sycamore fig rootstock the common figs can grow more rigorously with less chance of being affected. Note: The grafting of figs will not rectified problems with 'Leaf Rust' which is caused by rain and early morning dew.





CFG has donated approximately thirty potted Turpentine and Valencia Pride mango (*Mangifera*) seedlings for a program sponsored by the Naples Botanical Garden (NBG) to duplicate the unique cultivar varieties that exist at Williams Grove, located in Homestead. The successfully grafted trees will be maintained at NBG. Hopefully, future scions will be available for distribution to club members.

Interested in Growing Vanilla?

At this point, UF/IFAS is collecting the names and contact information of anyone that might be interested in growing Vanilla. Greater interest from stakeholders will strengthen our chances of getting funding to help you grow vanilla. **Please email Dr. Alan Chambers,** <u>ac@ufl.edu</u> if interested, and add "Florida Vanilla" in the subject line of the email. There is no obligation or commitment. Please also feel free to check out our vanilla growing guide available at <u>https://www.tropicalfruitbreeding.com/vanilla</u>.

Hurricane Preparedness and Recovery

^I Hurricane season is in full swing. It is best to be familiar with the following agriculture and farm related resources from UF/IFAS Extension:

Disasters: Preparation & Recovery Tips: <u>http://www.piecenter.com/wp-content/</u><u>uploads/2019/06/Disaster20prep20cards.pdf</u>

Protecting Farm building; Power Failure on the Farm; Protecting Livestock; Farm Cleanup: <u>https://sfyl.ifas.ufl.edu/archive/hot_topics/disaster_prep/</u> hurricane_prep_ag.shtml

Preparing for and Recovering from Hurricane and Tropical Storm Damage to Tropical Fruit Groves in Florida: <u>https://edis.ifas.ufl.edu/hs287</u>

Hurricane Preparation List for the Container Nursery: http://edis.ifas.ufl.edu/ep547 Animal-Related Emergency Response and Sheltering information (domestic and livestock) : https://www.freshfromflorida.com/Consumer-Resources/Animals/Animal-Related-Emergency-Response

Six Steps in Making an Insurance Claim: https://edis.ifas.ufl.edu/dh199

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The Bonita Springs Tropical Fruit Club, Inc., is an educational not-for-profit organization whose purpose is to inform, educate and advise members and the public in the selection of plants and trees, to encourage their cultivation, and to provide a social forum where members can freely exchange plant material and information. The club cooperates with many organizations, and provides a basis for producing new cultivars. We function in any legal manner to further the above stated aims.

General Meeting:

General meeting, that include an educational program, are held the *second Tuesday* of each month. General meetings begin at 6:15 pm for social time, and the **speakers begin promptly** at 7 pm., at the Revive Magazine, 28410 Bonita Crossing Blvd., #11, Bonita Springs.

Workshops:

Workshops (monthly discussions) are held on the *fourth Tuesday* of each month at **7 PM** at the Methodist Church, when practical. This open format encourages discussion and sharing of fruits and information. Bring in your fruits, plants, seeds, leaves, insects, photos, recipes, ect.. This is a great chance to get answers to specific questions, and there always seems to be a local expert on hand!

Tree Sales:

Semi-annual tree sales in March and November, in the Bonita Springs area, raise revenue for educational programs for club members and other related purposes of the club.

Trips:

The club occasionally organizes trips and tours of other organizations that share our interests. The IFAS Experimental Station and the Fairchild Nursery Farm are examples of our recent excursions.

Membership:

Dues are \$15 per person for new members, and \$25 per household. Name tags are \$6 each. Send checks to: PO Box 367791, Bonita Springs, FL 34136, or bring to any regularly scheduled meeting.

OCTOBER CALENDAR OF EVENTS

- Tuesday 1 Monthly Meeting: **Caloosa Rare Fruit Exchange**, 7:00 PM, Fort Myers-Lee County Garden Council Bldg., 2166 Virginia Ave., Fort Myers.
- Weekly Nursery Workshops: Every Thursday year around, 9:00 AM until at least 1:00 PM, Cornerstone Nursery, 8200 Immokalee Road, North Naples – Learn about fruit trees, volunteer in the nursery, or just come and listen to Crafton's stories.
- Tuesday 8 Monthly Meeting: **Bonita Springs Tropical Fruit Club**, 6:15 PM Tasting Table, 7:00 PM Program: The speaker will be Jessica Mendes Ryals, UF/IFAS Collier County Extension Office.
- Wednesday 8 Monthly Meeting: **Rare Fruit Council International, Miami**, 7:00pm in the Science Village Classroom next to the Butterfly Exhibit at Fairchild Tropical Botanic Garden, 10901 Old Cutler Road, Coral Gables.
- Tuesday 15 Seminar: **Produce Safety Alliance: Grower Training**, 8:00 AM to 5:00 PM,_UF/ IFAS Southwest Florida Research and Education Center 2685 SR 29 North Immokalee, FL. There is a \$25 fee to participate. Contact Jessica Ryals at: jessicaryals@ufl.edu Tel. no. 239.252.4800 Register at: <u>https://tinyurl.com/y4uspr43</u>
- Tuesday 15 Monthly Meeting: **Collier Fruit Growers**, 7:00 PM Social, 7:30 PM Program: Tree of Life Church, Life Center, 2132 Shadowlawn Drive, Naples. Dr. Noris Ledesma will be the speaker.
- Saturday 19 **Tour of the gardens of Bonnie Hawkins**, 10:00 AM to 12:00 noon, 3869 19th Avenue SW, Naples. Please park on the street.
- Wednesday 16 Meeting: Southwest Florida Small Farmer Network at Hebbell Farm, Fort Myers, 10:00 AM to 3:00 PM, Contact Jessica Ryals at UF/IFAS Collier County Extension, 14700 Immokalee Road, Naples: jessicaryals@ufl.edu Tel. no. 239.252.4800 for the meeting's location. Free
- Tuesday 22 Monthly Workshop: **Bonita Springs Tropical Fruit Club,** 6:45 PM: First United Methodist Church, Fellowship Hall, 27690 Shriver Ave., Bonita Springs.

FALL FRUIT TREES SALES

November 16th, Bonita Springs Tropical Fruit Club
9:00 am to 2:00 pm, St. Mary's Episcopal Church
9801 Bonita Springs Road SE, Bonita Springs
November 23th, Collier Fruit Growers
9:00 am to 2:00 pm, Freedom Park
1515 Golden Gate Parkway, Naples
Come at 9:00 for the best selection of Fruit Trees, No early birds.



Fruits which Ripen in October:



Atemoya, banana, Barbados cherry, carambola, carissa, coconut, fig, guava, jackfruit, kwai muk, macadamia, miracle fruit, monstera, muscadine grape, Otaheite Gooseberry, papaya, passion fruit, passionfruit, peanut butter fruit, pomegranate, soursop, Spanish lime, strawberry tree, sugar apple. Annual Fruits: watermelon,



Feel free to join BSTFC on **our Facebook group**, where you can post pictures of your plants, ask advice, and find out about upcoming events!

https://www.facebook.com/groups/BSTFC/

Link to the **next meeting**: <u>https://www.facebook.com/groups/BSTFC/events/</u> **Meetup** Link (events/meetings sync with the calendar on your phone!):

https://www.meetup.com/Bonita-Springs-Tropical-Fruit-Club/

Our **Website** (and newsletters with tons of info): https://www.BonitaSpringsTropicalFruitClub.com/

Officers and Board of Directors:

Jeneé Dampier - President Jorge Sanchez - Vice President Micah Bishop - Treasurer Lisa Mesmer - Secretary Crafton Clift - Director Luis Garrido - Director Berto Silva - Director



Like Us on Facebook! <u>https://www.facebook.com/groups/BSTFC/</u>

The Collier Fruit Growers Inc. (CFG) is an active organization dedicated to inform, educate and advise its members as well as the public, as to the propagation of the many varieties of fruits that can be grown in Collier County. The CFG is also actively engaged in the distribution of the many commonly grown fruits, as well as the rare tropical and subtropical fruits grown throughout the world. CFG encourages its members to extend their cultivation by providing a basis for researching and producing new cultivars and hybrids, whenever possible. CFG functions without regard to race, color or national origin.



REMEMBER TO RENEW YOUR MEMBERSHIP!

2019 CFG BOARD OF DIRECTORS

OFFICERS:

President, Rodger Taylor - 239-384-9630 Bonnie Hawkins, Vice President Melissa Parsons, Treasurer Jennifer Adriaanse, Secretary

DIRECTORS AT LARGE



VISIT US AT: www.collierfruit.org Crafton Clift, Director Micah Bishop, Director Jorge Sanchez, Director

Like Us on Facebook! <u>https://www.facebook.com/CollierFruitGrowers/</u>

The Collier Fruit Growers monthly meetings are now broadcast live on Facebook at 7:30 pm on the third Tuesday of each month. The meetings are posted on the 'Collier Fruit Growers Group's Facebook page. Access the page by requesting to be a Member.