



The Fruit Growers of Southwest Florida

JUNE 2021

Bonita Springs Tropical Fruit Club Meeting will be on Saturday, June 12, at 4:30 pm.
Workshop: Saturday, June 26, 2021, at 4:30 pm.
Location: Newport Animal Hospital
25100 Bernwood Drive, Bonita Springs, FL 34135

Please always observe the wearing of masks and social distancing. Please remember to pay your 2021 renewal dues: \$15/ individual, \$25/ family.



Owner of Naples Fruit Farm, Marley Hagerstrom will be the speaker at the Collier Fruit Growers Meeting on June 15. Marley has a 4.5-acre certified organic farm consisting of superior varieties different tropical fruits such as banana, mango, lychee, avocado, canistel, and sapodilla. Naples Fruit Farm specializes in mangoes with nearly 200 trees of over 70 varieties. Growing mango in high density setting requires an intensive pruning program to maintain tree health and enhance productivity. The same concept can be applied to

dooryard applications where growing space is limited for the homeowner. We will discuss the basic concepts of pruning required to "sculpt" a structure needed to support heavy fruit load and mitigate damage from strong winds. Marley will discuss his favorite, best producing mango varieties. He will conduct a mango tasting and will also have mangoes available for sale.

The much-anticipated Grafting Class is now slated for Saturday, September 25. An overview of principles and basic techniques will be discussed. Mango grafting will be demonstrated by Dr. Noris Ledesma, considered by many as the world's foremost mango authority, followed by individualized instruction. There is an excellent possibility that the Class will be held at the Naples Botanical Garden, and participants will have the opportunity to tour the entire garden.

The twenty persons who signed up for the cancelled grafting class on June 6, 2020 will be automatically registered for the rescheduled class. Once the exact time and place has been established each person will be notified. The Participants will be given the opportunity to withdraw and have their \$10 fee refunded. A short-list of possible substitutes will be compiled in the order of when their requests are received by e-mail at rtaylorrm@comcast.net The \$10 fee will be due the day of the class.

Collier Fruit Growers' NEXT Meeting: Tuesday, June 15, 2021, at 7:15 pm.

Life Center, Tree of Life Church

2132 Shadowlawn Dr., Naples, FL 34112

Remember: If you are not vaccinated, please wear your mask and practice social distancing.

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www.CHEFDANIELA.com 239.010.0935

Chef's recipe for Marmalade

I truly love Carambola! Not only is it chockfull of vitamins and minerals, but it is also so beautiful which is why I like it to use it as decoration for my platters. Star fruit is filled Vitamin C which assists with collagen synthesis, a protein that keeps skin, hair, and nails healthy and strong. Vitamin C also plays a key role in boosting iron absorption. This leads to increased production of blood cells and helps ward off fatigue and lightheadedness, the classical symptoms of anemia. It's a fantastic source of fiber as well as being low calorie, low carb, and low sugar so you can add it to your salad and smoothies easily for benefits like anti-microbial, anti-bacterial and anti-fungal to reduce any inflammation in your body. You can even eat some before you go to sleep because its full of magnesium (https://www.sciencedirect.com/science/article/pii/B9780124201682000314), a sleep-promoting mineral. Star fruits can keep your digestive system regular and hydrate you after a workout. Carambola is also a heart-friendly fruit that lowers cholesterol levels! It should be noted that although Star Fruit is all around a super food, it is not for everyone. In fact, people with kidney stones should completely avoid it.

Star fruit marmalade:

INGREDIENTS:

4 ripe firm carambola

1.5 cups of organic cane sugar

1 clove

1 small stick cinnamon

1 lemon

1 oz pectin (read the direction on the pectin)

DIRECTIONS:

Wash and slice the fruit. Discard seeds and add sugar.

Keep aside for 2-3 hours till the juice oozes.

Bring to a boil and reduce to a simmer, stirring occasionally.

Add clove and cinnamon and continue boiling for 1 hour

The juice will get thin and then thicker again.

When mixture is thick enough to put to plate test, take off fire.

I like to pass mine in to the Vitamix for a creamer consistency and put it back on the stove for 10 more minutes.

Add lemon juice and the lemon zest.

Stir well, take off fire.

Bottle in a sterile, screw top jar and enjoyed all year around.

Fig Nematode Resistant Rootstock Project, 2019 status report Posted on December 22, 2019 by *Craig Hepworth, the* Florida Fruit Geek



A fruit of `LSU Scott's Black' fig from a plant grafted onto the nematode resistant rootstock which I am calling `Ficus Echo' (probably *Ficus sycomorus*). My project is to pair the best-tasting, most well-adapted fig varieties in Florida to the Ficus species which do best as rootstocks in this area. My project to test out various Ficus species as potential nematode-resistant rootstocks for edible figs has made slow but steady progress in 2019. Root-knot nematodes are one of the biggest challenges in growing figs in Florida and other warm climate regions around the world. I am trying to acquire every Ficus species that is reported to be nematode-resistant and graft-compatible with edible fig, *Ficus carica*, and test them as rootstocks.

One challenge in this project is that while the scion, *Ficus carica*, can handle hard freezes, many of the Ficus species I am working with as potential rootstocks are tropically adapted, and cannot handle temperatures much below 32F (OC). If freezing temperatures kill the portion of a rootstock below the graft union, that will kill the scion as well.



The scion-rooting issue. Most of the Ficus species I am working with as potentially nematode resistant rootstocks are tropical, and do not handle freezing temperatures. So, I am grafting low, and once the graft has healed, I cover the graft union with soil and/or mulch. In many cases, the scion sprouts out roots when I do this. Here I grafted an 'Alma' fig onto 'Ficus Echo' (probably *F. sycomorus*). That rootstock is on the right, graft union is near the tip of my index finger. The fig scion has sprouted out that big root on the left, just above the graft union. I do not know if leaving this will cause the plant to let the grafted rootstock die off. I might leave it to see what happens.

The way I have dealt with that issue is to graft low on the rootstock and bury the graft union (sometimes the graft union is right at the soil surface, covered loosely with mulch). When planted this way, frequently the scion sprouts out roots above the graft union. I am not sure what the long-term result will be. Possibly over time this could cause the tree to let the grafted root system die off, preferring its own roots, in a manner analogous to the way that letting suckers from below a graft union can cause a tree to let a scion die off. Possibly it could depend on whether there are in fact root knot nematodes at that planting location, attacking any roots the scion tries to send out from above the graft union.

If this issue turns out to be a major problem when fig graft unions are buried, it might be necessary to keep the graft union above the ground and be diligent every winter about wrapping the portion of the tree trunk between soil and graft union with some sort of freeze-protective material. Or the tropical Ficus species might turn out to be practical as fig rootstocks only in areas not subject to freezing temperatures.

Here is a list of the Ficus species I am experimenting with. I have given some of them clonal names because Ficus species can be tricky to identify. in the past, some of the plants I have acquired with species names have turned out to be misidentified. If I am anything less than 100% sure of a species ID, it is safest just to name that clone based on where I acquired it. Also, varieties of some Ficus species might vary in how well they perform as rootstocks, so keeping track of different clones within a species might help to keep track of those differences.

Ficus 'Echo', probably Ficus sycomorus:



This is the one I got from Echo in Fort Myers. I am calling it 'Ficus Echo' until I can definitely ID it (probably it's Ficus sycomorus). This Ficus definitely makes a nematode resistant rootstock for figs, but it is frost sensitive.

I obtained this species many years ago from ECHO, the outstanding nonprofit organization in North Fort Myers, where they have used it as a fig rootstock. (Note: in a previous post, I called this accession Ficus glomerata/racemosa, which is the name I was told it was when I got it. I have since found out it's probably Ficus sycomorus, and I've added a note to the effect to the original post.)

This one definitely is both graft compatible with figs and is nematode resistant, and can make a good rootstock for figs over the long term. Echo had a mature fig tree grafted on this rootstock which I photographed in 1998, and I have heard that the tree is still there, still producing. I know of one 'LSU Scott's Black' fig tree grafted on this rootstock which was planted out around 2016 in Gainesville, and it is doing well.

'Ficus Echo' is extremely frost sensitive – temperatures just a few degrees below freezing will kill it to the ground. This is not much of a problem in the southern part of the Florida peninsula, but in central and North Florida it definitely poses a challenge, as I described above.

In 2018, I planted out an 'Alma' fig grafted on 'Ficus Echo'. It has grown slowly. In 2019, I planted out three more figs grafted on this rootstock: 'Celeste', 'LSU Tiger', and 'LSU Purple'. The 'LSU Purple' fig has grown rapidly, while the others have been slow growing so far.



'LSU Purple' fig grafted onto Ficus Echo (which is probably *Ficus sycomorus*). This plant was less than knee high when planted out in early summer, photo taken in December.

'Ficus Echo' seems to be effective as a nematode-resistant rootstock for figs for South Florida and other areas not subject to freezing temperatures. For areas prone to freezes, it is less clear if this can be a good rootstock over the long term.'Ficus Echo' propagates readily by cuttings. I usually have lots of this rootstock. I do not ship it but contact me if you want to come by my place and get cuttings of this one. Frequently, there is so much that you could fill a truck bed with trimmed branches to use as cuttings.

Ficus pumila:

Ficus pumila has two different growth phases, juvenile and mature. It is often grown as an ornamental in its juvenile phase, when it grows is a thin stemmed climbing vine, covering walls like ivy. In its mature phase, the stems get much thicker, making them easy to graft. It is possible to root cuttings from the mature phase, and graft figs onto them.



Fig, probably 'Southern Brown Turkey', grafted onto Ficus pumila.

I have grafted several figs onto this rootstock, and they all seem to show a curious pattern: the plant sends up one or more "normal" upright stems, but also sends out from just above the graft union some densely branching stems with profuse numbers of figs. It seems like there is dwarfing effect happening with this rootstock.

Ficus pumila can take at least some frost, meaning the graft union does not need to be buried in my area of North Florida.

I have only done a few of these grafts. One of them planted out in the ground grew for a year and then died – both rootstock and scion. I do not know if the cause of death was related to the graft. I have two others, one in a pot, the other in the ground. Both are showing a similar pattern of putting out dense growth, low to the ground, fruiting heavily. I had speculated that this species might function as a dwarfing rootstock for figs, and this very preliminary evidence indicates this might be the case.

Ficus pumila is listed as cold hardy to 20F, so in areas where winter lows stay above that temp, figs could be grafted above soil level on this species.

In the nursery trade, there are hybrids between *Ficus pumila* and *Ficus carica* available. I want to get some of these plants and test them as rootstocks.

Ficus palmata 'Icebox:'



Ficus palmata 'Icebox'

I acquired a plant of *Ficus palmata* 'Icebox' from Plant Delights Nursery in 2018. This clone has turned out to be a little tricky to propagate by cuttings – I've gotten maybe 25% success on cuttings of it, compared to close to 100% on some of the other species. But that attempt did result in a few successfully rooted plants, and in early 2019 I grafted 'LSU Tiger' onto one of those, and planted it out in the ground in early autumn. The plant has grown rapidly.



'LSU Tiger' fig grafted onto Ficus palmata 'Icebox'. This was planted out in early autumn 2019, but it still managed to about triple its size by December when I photographed it.

Apparently, Ficus palmata can handle at least some frost, and cold tolerance might vary from one clone to another. The 'Icebox' clone reportedly came from a high elevation population which might be frost tolerance. In the coming winters, I should be able to establish how much cold this

Just to be safe, for the one fig I have grafted onto this rootstock so far, I grafted low and buried the graft union when I planted it out in the ground. If this rootstock clone turns out to have significant frost tolerance, it might be possible to graft higher, above the ground, preventing the scion from establishing roots.

Ficus 'Bat House:'

This is a Ficus growing in the Ethnoecology Garden near the Bat House at the University of Florida in Gainesville. The plant resembles *Ficus palmata*, which is supposed to be nematoderesistant and graft-compatible with edible fig. I propagated numerous plants of this one by cuttings and tried grafting figs onto them. Some of the grafts took, but they were weak. They made very little growth, and eventually died after a few months. At this point I am thinking this is probably not *Ficus palmata*, but some other Ficus which is only weakly graft-compatible with Figure 1. Figure this one. I gave plants of this to a few people – if you got a Ficus plant labeled 'Bat House' from me, and if you have tried grafting figs onto it, please let me know what results you got - either good or bad.

Ficus 'Shadowood', probably Ficus racemose:



This one came from a packet of seed that was labelled *Ficus racemosa*. I got it from Shadowood Farm, so for now I am calling it Ficus 'Shadowood' pending positive ID.

In 2019, I acquired this one from Nathaniel at Shadowood Farm in Palm City, Florida. Nathaniel had ordered the seed from a vendor in India, who was selling it as Ficus racemosa (which is formerly known as Ficus glomerata). Nathaniel did one fig graft onto this species, which was doing well at the time of my visit in mid-2019.

The original plant I got has grown considerably, and it turns out to propagate extremely well by cuttings. I have a couple grafts I have made onto plants of this, too soon to tell how well they are doing.

This species is definitely tropical and will require a buried graft union in frost prone areas.

Ficus opposite:



This grew from a packet of seed labelled *Ficus opposita*.

A 1925 report from the Florida State Horticultural Society reported that figs successfully grafted onto an unknown Ficus species from Australia and grew and fruited very well on that rootstock. I posted on **Tropical Fruit Forum in 2015**, asking if anyone might be able to identify which Australian Ficus species the 1925 report was referring to. The ensuing discussion over the next three years on that thread indicated the species in question was most likely *Ficus opposita*. In Australia, some nurseries reportedly are using this native Australian species as a rootstock for figs today.

So, in 2019, I ordered seeds of *Ficus opposita* from Australia. It took a couple of tries, but I finally got a packet of seed in the mail, and out of the hundreds of seeds, two seedlings germinated, one of which promptly died from damping off. The remaining seedling survived. That plant has grown well, and I have gotten a first few cuttings from it (seems to take well from cuttings.) I am looking forward to trying to graft figs onto this one.

Other Ficus species:

Someone in the Phillippines commented on one of my previous posts, saying in that country they use *Ficus septica*, *Ficus pseudopalma*, and *Ficus ulmifolia* as rootstocks for edible figs. I do not have any of those species yet, but I would like to try them.

Grafting technique:



One grafting technique I am experimenting with is to cleft graft fig scions onto branches of tropical, nematode resistant Ficus species. Once the grafts have taken, I will trim those branches and root them as cuttings to hopefully get plants with a graft union low enough to easily protect by covering with soil or mulch.

I propagate all these Ficus species by rooting cuttings, and I have been experimenting with a variety of methods of grafting figs onto them, including budding, cleft grafting, and side grafting. I have had mixed results. As described above, on the tropical rootstocks, it is important to graft low, and if I try grafting low onto a rooted cutting and that first graft attempt fails, it can be difficult to do another low graft on the same plant. One technique I am experimenting with to deal with this is a technique I heard has been used by legendary Florida plantsman Crafton Clift. In this method, I cleft graft twigs of edible fig onto outer branches of a rootstock plant. For grafts that are successful, I can then cut them off below the graft and root them as cuttings. By cutting only a few inches below the graft union, it should be possible to produce plants with a graft union exceptionally low, for easy protection from winter cold in the resulting tree. So far, I have succeeded in getting some of these grafts to take but have not tried rooting them yet. One concern with this method is that if any of the fig varieties are virus infected, this method could infect the rootstock plant which would then infect any subsequent fig grafts placed on it. So, for good plant hygiene, I have put several Ficus Echo plants in seven-gallon pots for use in grafting this way. Each rootstock plant will be used for grafts of just one accession of *Ficus carica*, to avoid any possible virus transmission. Occasionally, I hear about other people working on Ficus species as rootstocks for figs. Very few of these projects appear to have been described in a place online accessible to search engines. If you are working on this, I encourage you to get in touch - either leave a comment on this post or contact me at: floridafruitgeek.com I encourage you to post about your work in a place accessible to search engines.

Explore related posts on this blog: #fig #Ficuscarica #nematoderesistantfigrootstock #Moraceae #grafting

ROOTING SOFT CUTTINGS OF SOURSOP (ANNONA MURICATA) 'GIANT OF ALAGOAS'

September 2011

[This article published by the International Society for Horticultural Science reported the following experimental findings. It collaborates the statements attributed to Julia F. Morton, (Proceedings of the Florida State Horticulture Society, 1966-67) as recorded in the February 2021 FGSWF Newsletter.]
Authors: M.Q.C. Santos, E.E.P. Lemos, T.L. Salvador, L.P. Rezende, T. Lima Salvador, J.W. Silva, P.G. Barros, R.S. Campos

Abstract:

Soursop (Annona muricata) is a tropical fruit tree that occupies a promising position in today's Brazilian fruit market. The growing demand and interest by the processing industries of sorbets and juices for the soursop pulp justifies the increasing production areas in northeast Brazil. Nevertheless, most of soursop plants have been propagated by seeds which bring as a consequence highly heterogeneous orchard. Therefore, vegetative propagation of elite trees has been recommended to produce uniform and more productive orchards. Among the existing cloning methods, stem cuttings is one that presents simplicity, speed, low cost and has been preferred by commercial nurseries. The objective of this work was to improve the vegetative propagation of soursop by cuttings and to study the effect of length, number of leaves and leaf area on the rooting process of soursop soft mini cuttings. Thus, the feasibility of propagating the soursop by means of soft stem cuttings has been investigated on an entirely randomized 2×3 factorial experiment with four replicates and 10 cuttings per plot. The soft cuttings were collected from apical branches of eight-year-old trees with 12 cm and maintained with 2 or 4 leaves left entire, halved or with a quarter of their original length. All cuttings had the base treated with 2000 mg/kg acid indole-3-butyric acid (IBA) powder. After 6 weeks the percentage of rooted cuttings, number and length of roots, and number of remaining leaves on cuttings were examined. Soft stem mini cuttings revealed high capability to root. The percentage of rooted soft cuttings was about 70% on two leaves cuttings. The length of the mini cuttings did not influence rooting ability. The lower number and size of the leaves significantly improved rooting percentage and number of roots. Rooting percentage was about 70% on soft cuttings with a pair of trimmed leaves.

[Note: The relative humidity of the room (mist house) was maintained close to 90% RH by a fogging system that operated every 10' (minutes) during the day and was turned off at night.]

The complete article can be found at: www.researchgate.net/profile/Eurico-Lemos/publication/289861648 Rooting soft cuttings of soursop Annona muricata % 27giant of alagoas/links/56c1b43908aeedba0566c685/Rooting-soft-cuttings-of-soursop-Annona-muricata-giant-of-alagoas.pdf



Mango Grower's Summit, Tuesday, September 28, 2021

Hilton Daytona Beach Oceanfront Resort, 100 North Atlantic Avenue, Daytona Beach, FL 32118.

Dear Commercial Mango Growers:

We are inviting you to attend to the Mango Grower's Summit 2021 at the Hilton Daytona Beach Oceanfront Resort, 100 North Atlantic Avenue, Daytona Beach, FL 32118 on Tuesday, September 28, 2021.

The Florida State Horticultural Society will hold the Mango Grower's Summit, a one-day event, as part of the 134th Annual Meeting of the Florida State Horticultural Society to be held September 26 to 28, 2021. Commercial mango growers will have the benefit to attend to all the lectures during the FSHS meeting. This is an opportunity to network with growers and to take an in-depth look at quality mango production.

The FSHS conferences are open to the mango growers for more information. please visit: https://fshs.org/meetings/.

Free Admission for mango farmers, sponsored by National Mango Board.

Registration is required, please contact Wanda Ramos wramos@mango.org Cell: 321-947-3629

AGENDA

9:00 Registration

12:00 p.m. Lunch (Included)

1:20 p.m. Welcome

1: 30 p.m. National Mango Board Tools for the Mango Industry

Mitton, R.V^{1, 1}National Mango Board, U.S.A; ²Food Safety Consulting & Training Solutions LLC , Orlando Fl, USA.

1:45 p.m. Mango Internal Discoloration ("Cutting Black" or "Corte Negro"). Jeffrey K. Brecht, University of Florida, IFAS, Horticultural Sciences Department, Gainesville, FL, USA.

2:00 p.m **'Rapoza' A Potential Mango Cultivar for the Americas,** <u>Noris Ledesma</u>. Hervert Yair Ordoñez

2:15 p.m. **Developments Mango Breeding Side of the Project**, Alan Chambers, Tropical Research and Education Center | Horticultural Sciences Dept | University of Florida

2:30 p.m. A Review of Asam Kumbang (*Mangifera quadrifeda* Jack.), Noris Ledesma, M. Hanif Micaksono ², ¹ Tropical Research & Education Center, University of Florida/IFAS, Homestead, Florida., ² Tunas Meratus, Gambah Luar Muka, South Kalimantan, Indonesia.

2:45 p.m. Mango Collection at Fruit and Spice Park, Louise King, Fruit and Spice Park.

3:00 p.m. Expanding Mango Consumption Phase 1: mango (Mangifera indica) cultivar evaluation for the National Mango Board, Jonathan H. Crane, University of Florida/IFAS, Tropical Research and Education Center, Homestead, Florida

3:15 p.m. Mango Forum



Who We Are & What We Do

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:

The General Meetings will be held on the second Saturday of each month starting at 4:30 pm. The Meetings will be held at the Newport Animal Hospital.

Workshops:

Workshops will be held on the forth Saturday of each month starting at 4:30 pm. The Workshops will be held at the Newport Animal Hospital. 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 JUNE and June, 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.



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

Jorge Sanchez, President
Luis Garrido, Vice President
Dwain Kiddo, Treasurer
Talitha DeLuco, Secretary
Crafton Clift, Director
Lisa Mesmer, Director
George Kaladiny, Director



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

2021 CFG BOARD OF DIRECTORS

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!

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Crafton Clift, Director Micah Bishop, Director Jorge Sanchez, Director Lisa White, Director





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