



The Fruit Growers of Southwest Florida

FEBRUARY 2020

It is a New Year and Time for You to Renew Your Membership Dues or risk losing the delivery of the monthly newsletters and other organizational privileges. Please mail your dues with your name and current contact information to:

Collier Fruit Growers

\$15 per Individual / Family

Mail To: 1944 Piccadilly Circus, Naples FL 34112

Bonita Springs Tropical Fruit Club

\$20 per Individual / \$30 per Family

Mail To: 7228 Everglades Blvd., Naples FL 34120



The speaker at the Collier Fruit Growers meeting on February 18 will be Stephen Cucura owner of Fruitscapes, Inc., the preeminent fruit tree nursery located on Pine Island and the vendor of CFG's semiannual Fruit Tree Sales. The nursery is well worth a visit with many fruit trees suitable for the south Florida climate, as well as picked fruits, organic vegetables, preserves, baked goods and cooked items under the chickee hut. Steve will speak about fruit trees which are best suited for Southwest Florida. Steve will also accept pre-orders of selected fruit trees for the Saturday February 29 Tree Sale at Collier County's Freedom Park, 1515 Golden Gate Parkway.



**Collier Fruit Growers Meeting: TUESDAY, February 18th.
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**



Christy Lyle the President and Co-Owner of ProPlus Products, Inc. will be the presenter at the February 11 Meeting of the Bonita Springs Tropical Fruit Club. Christy's dad, Jim Lyle, started his business in 1982 to sell "Fertigation" to Florida golf courses. Christy joined her dad in 1993 as ProPlus' Central Florida Sales Representative. She was the first woman to sell fertilizer in Florida's golf industry. Christy, along with her sister Holly, now own and operate ProPlus. Their keen knowledge of formulating liquid fertilizer and Florida soils along with excellent customer service have earned them the reputation of being a leader in Florida's fertilizer industry.

Christy served on the Board of Directors for the Florida Turfgrass Association, helped develop Florida's Golf BMP certification, and is a member of the Florida Fertilizer and Agrichemical Association and several Florida Golf Course Associations.

Christy has conducted fertilizer training for the University of Florida, The Golf Course Superintendents of America, Florida Golf Course BMP certification training classes, Florida Golf Course Associations

seminars, Edison College, and Lake City Golf Course Superintendent program.



**Bonita Springs Tropical Fruit Club Meeting: Tuesday, February 11th.
Tasting Table Begins at 6:15 pm. Meeting Starts at 7:00 pm.
Revive Wellness Center, 3521 Bonita Bay Blvd.
Bonita Springs, FL**

RECIPE OF THE MONTH:

This recipe published on the 'The Daily Meal' website [www.thedaily meal.com] is a refreshing dessert incorporating two seasonal fruits. To give the pie a healthy kick use vegan heavy cream.

recipe:

Guanabana Cream Pie with Black Sapote

Ingredients:

six egg yolks
one cup heavy cream (vegan heavy cream can e used)
one cup guanabana puree
one-ounce powdered gelatin
one cup black sapote
twelve ounces granulated white chocolate
six ounces granulated or powdered sugar

Directions:

Whisk the egg yolks in with the granulated or powdered sugar, then whip in the heavy cream. Heat the soursop puree and the powdered gelatin until the gelatin is completely melted. Combine the granulated white chocolate and the black sapote in with the soursop gelatin mixture add the egg, sugar and cream mixture. Pour in a pie pan. ([A premade graham-cracker pie crust may be used.](#)) Chill in the refrigerator for a few hours, then serve.

Guanabana Cheesecake

Ingredients:

Two cups biscuit crumbs
(i.e. graham crackers)
Two tablespoons butter
nine ounces cream cheese
One small can of condensed milk
1/3-cup lemon juice
Two cups guanabana puree
Three teaspoons gelatin

**Directions:**

Dissolve the gelatin in ¼ cup of hot water.
Mix butter together with crumbs and press into pie pan.
Chill for at least two hours.
Mix the rest of the ingredients together. Pour into the chill lined pie pan and refrigerate overnight.
Top with shaved chocolate (optional) before serving.

Collier Fruit Growers, Inc. **FRUIT TREE SALE**

Saturday, February 29, 2020

9:00am - 2:00pm



AT FREEDOM PARK

1515 GOLDEN GATE PKWY.

NAPLES, FL



**MANY VARIETIES, SIZES, AND
PRICING TO MEET YOUR NEED
AND BUDGET.**

**COME EARLY FOR THE BEST
CHOICE BEFORE THE
INVENTORY IS SOLD.**

February Fruit Tree Sale is the most important fundraisers of the Year.

Volunteers are needed.

Come enjoy, learn, and purchase trees to enhance your garden.

A wide variety of fruit trees will be available on February 29.

The Tree Sale are from 9:00 am to 2:00 pm Saturday.

LOCATION:

Saturday 29

Freedom Park, 1515 Golden Gate Parkway, Naples

Proc. Fla. State Hort. Soc. 2002

HISTORICAL REVIEW, CULTIVARS, AND PROPAGATION OF THE BLACK SAPOTE (*Diospyros digyna* Jacq.) IN SOUTH FLORIDA.

Noris Ledesma and Richard J. Campbell, Fairchild Tropical Garden, 11935 Old Cutler Road, Miami, FL 33156.

Abstract. The black sapote, commonly called “chocolate pudding fruit”, is the family Ebenaceae. This fruit tree, native to Mexico, grows best in coastal areas from Jalisco to Chiapas, Veracruz and Yucatan. Black sapote has been cultivated in South Florida in home gardens and patios, in fruit collections, and to a small extent in commercial orchards. The tree is appreciated as an ornamental specimen and also produced a large quantity of fruit. The tree is usually dioecious, with small axillary flowers which have a persistent calyx. Propagation can be done by seed or by grafting. Grafting is the recommended way to guarantee the sex of the plants and the quality of their fruit. The methods evaluated here are cleft grafting and veneer grafting, using scions of 6 months of age. Most of the trees grows in the patios and gardens have been propagated by seed, but some superior selections have been grafted and sold by nurserymen. A selection named ‘Merida’ was made at the University of Florida Tropical Research and Education Center (TREC Homestead) and propagated by grafting. The information in this paper increases our knowledge a the economic viability of the black sapote in Tropical America.

Resumen. El sapote negro pertenece a la familia Ebenaceae, comúnmente conocido como ‘fruta pudín de chocolate’. El sapote negro es un árbol frutal originario de México que crece a lo largo de las costas desde Jalisco hasta Chiapas, Veracruz y Yucatán. Esta especie se ha estado cultivando en el Sur de la Florida en los jardines y patios de las casas, en algunas colecciones de frutas y a pequeña escala comercial. Este árbol es apreciado como especie ornamental y soporta una gran producción de fruta. Es una especie generalmente dioica con flores axilares pequeñas de cáliz persistente. La propagación del sapote negro puede ser por semillas o por injertos. La más recomendable y exitosa es por injertos ya que además puede garantizar el sexo de la especie y la calidad de la fruta. Los métodos de injertos evaluados son el de púa y el de aproximación utilizando patrones de sapote negro de 6 meses de edad. La mayoría de los árboles que crecen en los patios y jardines del Sur de la Florida han sido propagados por semilla, además se han hecho algunas selecciones por diferentes viveristas. La universidad de la Florida TREC-Homestead realizó una evaluación sobre ‘Merida’ un cultivar temprano de sapote negro los cuales fueron propagados por injertos. Esta información aumentará nuestro conocimiento acerca de la viabilidad económica de esta fruta en la región Tropical de América.

The black sapote (*Diospyros digyna* Jacq.) is native to the coastal regions from Jalisco to Chiapas, Veracruz and Yucatan, and although it was introduced to other regions of the Caribbean and Central America, it never attained significant importance. The black sapote has been under evaluation in South Florida for more than 50 years, with multiple introductions by institutions and individuals. As is the case with many tropical fruit, the first introductions were as seed from the center of origin. From these seedling trees, various selections have been made, although specific clones are not commonly recognized in local nurseries in South Florida.

General Description of the Tree and Fruit

Tree. The black sapote is generally dioecious, but there are occasional polygamous trees (Rhuele, 1958). The sex of the tree cannot be distinguished until flowering commences from 5 to 10 years after germination of the seed. Both male and female trees grow rapidly and form a canopy with a height and spread of 12 to 10 m, respectively. Canopy size is highly dependant on the space provided to each tree and the pruning treatments applied. Even without regular pruning the canopy naturally spreads, forming a handsome landscape specimen and casting a deep shade. The leaves range from 12 to 18 cm in length and 6 to 10 cm in width, with a light green color upon emergence and a deep green color at maturity. Grafted trees generally come into bearing within 3 to 4 years after planting and guarantee the sex of the tree.

Flowers and pollination. Both pistillate and staminate flowers are borne in the leaf axils of 1- to 2-year-old shoots (Campbell and Malo, 1988). The flowers are from 2 to 3 cm in diameter, with a prominent green calyx and whitish petals. The petals fall 3 to 4 days after opening, while the calyx persists and remains prominent throughout fruit

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development. It has been assumed that pollination from male trees was necessary to set a significant crop of fruit (Campbell and Malo, 1988); female trees of some cultivars will produce ample crops without manipulation while growing in isolation. The increased production and/or quality of the fruit due to the presence of a male tree is not known, and for commercial production the use of male pollinizers should be considered.

Fruit. The fruit shape is generally oblate, although among selections there is variation from rounded to oblong. Mature fruit have a prominent, persistent calyx and range from 200 to over 900 g per fruit, depending on the selection considered and the crop load and age of the tree. The surface of the developing and mature fruit is smooth and light to dark green. Some fruit have raised, corky lenticells. Fruit will ripen on the tree, turning to a dark green or dull brown color and softening completely. Unripe fruit have a tan to golden yellow color and are not edible, being astringent and acrid to the taste. When ripe the flesh turns completely soft with a deep chocolate color. The flavor is pleasant and sweet and there is no aroma. Seeds are from 2 to 3 cm in length, brown and hard. The number of seeds per fruit ranges widely, from less than 4 to over 15 in different selections.



Cultural Requirements

Climate. The black sapote is best adapted to a hot lowland tropical climate. It grows well in climates with well-distributed rainfall and areas with distinct wet and dry seasons. In arid regions of Israel and northern Africa the black sapote grows well and is highly productive if provided with ample water through irrigation.

Soils. The tree prefers a highly drained soil and will not tolerate flooding. In South Florida it grows and anchors itself well with a minimum of available rooting depth. It is highly adapted to calcareous soils, with a minimum of chlorosis associated with micronutrient deficiencies. The application of chelated irons and general micronutrient sprays is beneficial, however, to the overall health and bearing of the tree.

Temperature. As stated earlier, the black sapote is best suited to lowland tropical climates, although it tolerates extreme heat of 40 to 42°C in some regions. Cold temperatures of -1 to -2°C for even a short duration will result in leaf, twig and cambial damage. Temperature of -4 to -5°C will kill small and medium sized trees, and result in dieback of the major scaffold limbs on older trees.

Cultivars

Although the black sapote has been cultivated for centuries in its native range, there has been little progress made in the identification and selection of superior clones. A wide range of fruiting seasons, fruit sizes, shapes and yield potential exists throughout its native range and in select locations in the Caribbean and the United States. The cultivar 'Merida' was described by the University of Florida in 1988 (Campbell et al., 1988) as an early-maturing, high-quality and productive clone. 'Merida', often referred to by the name 'Reinecke' after the man that introduced the original

seeds from Mexico, is propagated in South Florida to a limited extent, but is not common in local nurseries and is unknown outside of South Florida.

Other selections are recognized in Mexico and in the limited regions of production of the black sapote. Although many of these selections possess superior attributes of size, quality and productivity, they are not rarely clonally propagated and are by-in-large only locally available.

Propagation

The dioecious nature of the black sapote dictates that clonal propagation should be used to produce the trees, thus guaranteeing that a pistillate tree of known identity is obtained. Graftage has been the predominant method of producing the black sapote in South Florida, although it is often considered a difficult species to graft.

Rootstocks. Rootstocks are obtained from healthy seed of local selections in the area. Seeds are planted in a well-drained mix of 1:1:1 of peat:sand:pine bark. Germination is in, with graftable plants obtained in Weeks.

Grafting Methods: The most effective method of grafting has been a cleft graft on scions of 2 cm thickness with Leaves. The size of the rootstock is important in providing sufficient energy to force the graft to grow. A cleft graft is done leaving a few leaves (cut in half) on the scion and all the leaves on the rootstock. The entire graft is either placed under intermittent mist or covered with a plastic bag to reduce water loss. The scions begin to grow within 2 weeks and the bags can be removed in 3 or 4 weeks. This method has given better than 80% during the warm months of the year.



Literature Cited

Campbell, C.W., J. Popenoe and S. Malo. 1988. 'Merida', and early-maturing black sapote cultivar. Proc. Fla. State Hort. Soc. 101:245-246.

Rhuele, G.D. 1958. Miscellaneous tropical and subtropical Florida fruits. Fla. Agr. Ext. Serv. Bul. 156A:48-49.

Proc. Fla. State Hort. Soc. 120:13-14. 2007.

The Inverted Root Graft: Applications for the Home Garden in Florida

NORIS LEDESMA AND RICHARD J. CAMPBELL*

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ADDITIONAL INDEX WORDS. propagation, Sapotaceae, estate gardening, graftage

Experimentation began over 15 years ago with a grafting technique with potential for size control and precocity of fruiting in tropical fruit. This technique, termed the inverted root graft, was inspired by a similar technique used for lucuma (*Pouteria obovata*) in a large Chilean nursery. The inverted root graft technique inverts the rootstock, yielding a tree without a defined taproot and an enhanced feeder root system. The technique has been used in Florida on canistel, mamey sapote, sapodilla, jackfruit, mango, and avocado with varying degrees of success. Thus far the results have been best with canistel and mamey sapote. The resultant trees are anchored well in the ground, have profuse branching that lends well to size management, and begin to bear at an earlier age than conventionally propagated trees of the same species. The commercial viability of this technique will depend on the species used, due to survival rates of grafts and ease of management of the technique. Also, there is clear evidence of clonal specificity within species that will require further study. However, given the superior horticultural traits of these trees, there is significant potential for home garden usage in Florida.

The costs involved with the establishment of most tree fruit operations make early returns on the investment an important economic consideration for commercial fruit production. For home garden and estate agriculture with tropical fruit crops, it is equally important to provide for early fruiting and proper tree architecture. This will improve the experience with a given tropical fruit, leading to greater use and nursery tree sales. A specialized propagation technique was developed over the past 15 years to address the issue of early production and tree architecture on a wide range of tropical fruit. The technique was developed originally for use on canistel (*Pouteria campechiana*), but has also been used on mamey sapote (*Pouteria sapota*), sapodilla (*Manilkara zapota*), jackfruit (*Artocarpus heterophyllus*), mango (*Mangifera indica*), avocado (*Persea americana*), and South American sapote (*Quararibea cordata*). The objective of the current paper is to detail our experience with the inverted root graft as a useful technique for the propagation of tree fruit for the home garden in Florida.

Detail of method. The species grafted to date all exhibit hypogeal germination with cryptocotylar seedlings. Thus, the cotyledons remain enclosed within the seed, with the formation of a strong taproot and single shoot. Shoot expansion often lags behind the formation of the taproot by several days to even weeks.

Seeds were sown and allowed to produce a strong taproot of preferably 8 to 12 cm. As mentioned above, the emergence of the shoot often lagged for weeks behind the root formation. Germinated seeds lacking apical vegetative shoots were preferable. The germinated seed was removed from the soil and the apical shoot removed if present. Removal of the vegetative shoot must be complete to avoid re-sprouting. The seed with its exposed taproot was inverted and the taproot decapitated at a length of about 5 cm. The diameter of the taproot varied among species. Generally, the thicker the taproot, the easier it was to graft.

A cleft graft was used into the inverted taproot (Figs. 1–2). Scions of equal diameter with the taproot were selected for use.

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Fig. 2. Top: Prepared inverted rootstock and scion. Bottom: Completed inverted root graft.

Straight taproots with minimal lateral branching were best for ease of grafting. Scions were used both with and without leaves, although our experience has shown the use of scions with leaves to yield superior success rates. The grafted plant (scion and inverted seed and taproot) was re-planted, leaving the graft union 1 cm above the soil surface. Scions with leaves were covered with a plastic bag and placed in a mist bed, whereas scions without leaves were covered with parafilm or similar material to retard water loss. Vegetative flushing of the scions occurred within 4 weeks of grafting in most cases.

Discussion and benefits of the inverted root graft. Following replanting of the grafted plant, fibrous root formation occurred. The fibrous root system in inverted root grafts was significantly greater than in conventionally grafted trees. A sometimes significant number of grafts in some of the tropical fruit species experimented with healed their grafts, but the inverted taproot formed few if any new roots. These trees languished and often died after several months. Success rates varied among the species grafted. Mango was the most difficult crop to graft, with percentage success rates from 10% to 20%. Jackfruit (50%), mamey sapote (60% to 70%), and particularly canistel (90%) were routinely successful. Resultant trees had more profuse branching



Fig. 1. Cleft cut on radical or inverted rootstock.

and precocious flowering in canistel and mamey sapote, but not with jackfruit, nor South American sapote. Grafted trees were ready for field planting with canistel in less than 1 year and would often ripen their first fruit within 18 to 22 months from grafting. Canistel is by nature a precocious species, but the inverted root graft trees were 1 to 2 years ahead of conventionally grafted trees in their fruiting.

We have had over 10 years of field experience with these trees in South Florida. Canistel and mamey sapote trees are the most remarkable in their response, forming dense, fruitful trees of small stature with minimal pruning. Resultant trees are well anchored and show no tendency toward susceptibility to wind throwing. Fruit size is normal and there is no evidence of an influence on fruit quality. The size control may be an influence of the early fruiting, and this does open up the potential of using this method for size control in these two fruit. Avocado and jackfruit trees have grown well, but they have not been precocious in their fruiting and the trees are not dramatically distinct in their growth habits. South American sapote trees are reduced in their stature, but again have not shown any precocity of fruiting.

Conclusions

The economic and aesthetic benefits of this technique must be weighed against the cost for each species considered. The inverted root graft has shown the greatest potential in the Sapotaceae, and we are currently undergoing experimentation with other members of this family. After more than 10 years of experience with inverted root grafts in the field in South Florida, we feel that the inverted root graft deserves consideration as a propagation method on tropical fruit in South Florida.

Vision for the Southwest Florida Research and Education Center

685 State Road 29 North, Immokalee, FL 34142

The SWFREC conducts high priority research and extension functions to generate new technologies and improved practices used by growers of the state to solve problems related to agricultural production and protection of natural resources. The primary goal of SWFREC is to facilitate improvements in area and statewide water and environmental quality, as well as agribusiness and labor supervision.

General goals of SWFREC include alternative citrus and vegetable crop production practices, insect and mite management. The faculty has contributed to improved citrus production of trees affected by Huanglongbing (HLB) but has not reduced efforts to address problems facing vegetable producers. Specific technologies researched by SWFREC include precision agriculture technology, computer-aided irrigation scheduling, growth model based nutrient management, organic options, soil microbiology, plant physiology, water conservation, and principles of economics and labor supervisory techniques.

In 2019 and during the next few years, improvements in the center's farm fields and grove will be a priority to keep pace with the agriculture industry. Hurricanes and tropical storms have dramatically pointed out the need for improved drainage on our experimental fields and grove. With the help of local growers, we have made improvements that will reduce the impact of all but the most devastating storms. Additional improvements remain, such as the drainage system and irrigation system on our farms have not been upgraded to current production standards. Money has been secured to automate our irrigation systems and provide the ability to fertigate our fields and grove, further improving our efforts to keep up with the practices employed by many of our clientele. These renovations include improved irrigation water delivery and sensor-based automation to facilitate better research and demonstration of critical agricultural input.

These improvements will allow researchers to implement fertilizer application through the irrigation system that is more efficient than ground applications and is becoming widely used by tree and crop farmers. The return on investment for these improvements is an increase in our ability to demonstrate the efficiency and effectiveness of the latest technology. These long-term productivity improvements will help increase agricultural research without increased impact on water quality and the environment. Additional newer equipment will be purchased in future years to greatly improve our ability to produce plots in keeping with our clientele.

NOTE: SWFREC publishes a newsletter six times a year announcing current research advances, papers, and listings of special events at the Center, highlights of which will be included in future issues of the FGSWF Newsletter.

LYCHEE INSECTS A, B, C, D AND E

By Crafton Clift

I used to think the only problem with lychee production in Florida was getting them to flower, but one year in the early 1980's they flowered and set abundant fruit, but the tiny fruit were being eaten. I called the University of Florida entomologist at TREC, Dr. Jorge Pena. He came to Frank Smathers' Four Fillies Farm and found five insects on the lychees that he had never seen before. He sent them up the 'ladder' and they ended up at the Smithsonian Institute, where no one had seen any of them before and they referred to them as lychee insects A, B, C, D and E. After ten years they realized these insects were new to science and Latin binomials were assigned to them.

Meantime, how do you keep nameless insects from eating lychees?

Smathers was famous for having a hundred of the world's best tasting mangos, but when it came to oranges and grapefruits, he left them on the trees. I went around the farm collecting oranges and grapefruits and ran them through a blender, peel and all. After straining so they would pass through a sprayer, they made his lychees not smell like lychees.

Providing a Solar Powered Irrigation System By Alberto Flores, Assisted by Robert Grady

Many people own land located in the central and eastern portions of Lee and Collier Counties where connection to the electrical power grid may be expensive. Gasoline powered pumping systems are expensive, time consuming and not reliable. There is a solar powered alternative. I am fortunate that my 300-foot property is located adjacent to a canal, thus avoiding the cost of having a 15 to 25 meter (50 to 85 foot) deep being dug. A float or field fabricated legs are required to keep the pump from resting in the organic sludge at the bottom of the canal. If a well is dug, the bore hole is dependent upon the outside casing diameter of the specific pump used. I have used a 12/16 Volts direct current (Vdc) submersible pump ['Solar Water Pumps' (Model S122T-40) delivering 2 cubic meter/hour (525 gallons/hour) at 40-meter (130 feet) head pressure, with a rated 180 Watts (W) input power requirement] with a calculated current requirement of 15 Amperes (A) at 12 Vdc. [Remember $W = V \times A$.] A 30 mm (1¼-inch) flexible hose runs from the pump to a 2 cubic meter (250 gallon) water tank, elevated approximately 6 meters (20 feet) above grade. A 38 mm (1½ mm) tank discharge line is connect to a balanced drip irrigation system which supplies water to my fruit trees. I have two solar (photovoltaic) panels connected in parallel rated to deliver a maximum 280 W of power at 44.4 Vdc each. The actual electrical current output from the combined two solar panels was approximately 10.2 Amperes (A) at 12 Volts on the day that I took the measurement. I have decided that two more solar panels are necessary for daily operation of the system under all sunlit conditions as the pump must be supplied with 12 Volts minimum to prevent burnout of the pump.

Other key components of the system are as follows:

Solar Voltage Regulator (Solar Charge Controller) installed after the combined output of the solar panels [wired on parallel] to regulate the system voltage from approx. 13.9 to 19 Volts as the batteries reach full charge; at full charge the solar panels will be shut off. The batteries are to assure that the pump always receives a minimum of 12 Volts.

At least two 12 Vdc, high Amperage 'marine' batteries [deep cycle preferred] to act as an electrical power reserve.

Dawn to dusk solar actuated on/off switch to enable the pump, and thus the system, to operate during all daylight hours. Charge batteries at least one hour daily before and after pumping.

A two-position float switch mounted at the top of the tank to control the pump. Float switch should operate a relay so no current flows through the actual float switch.

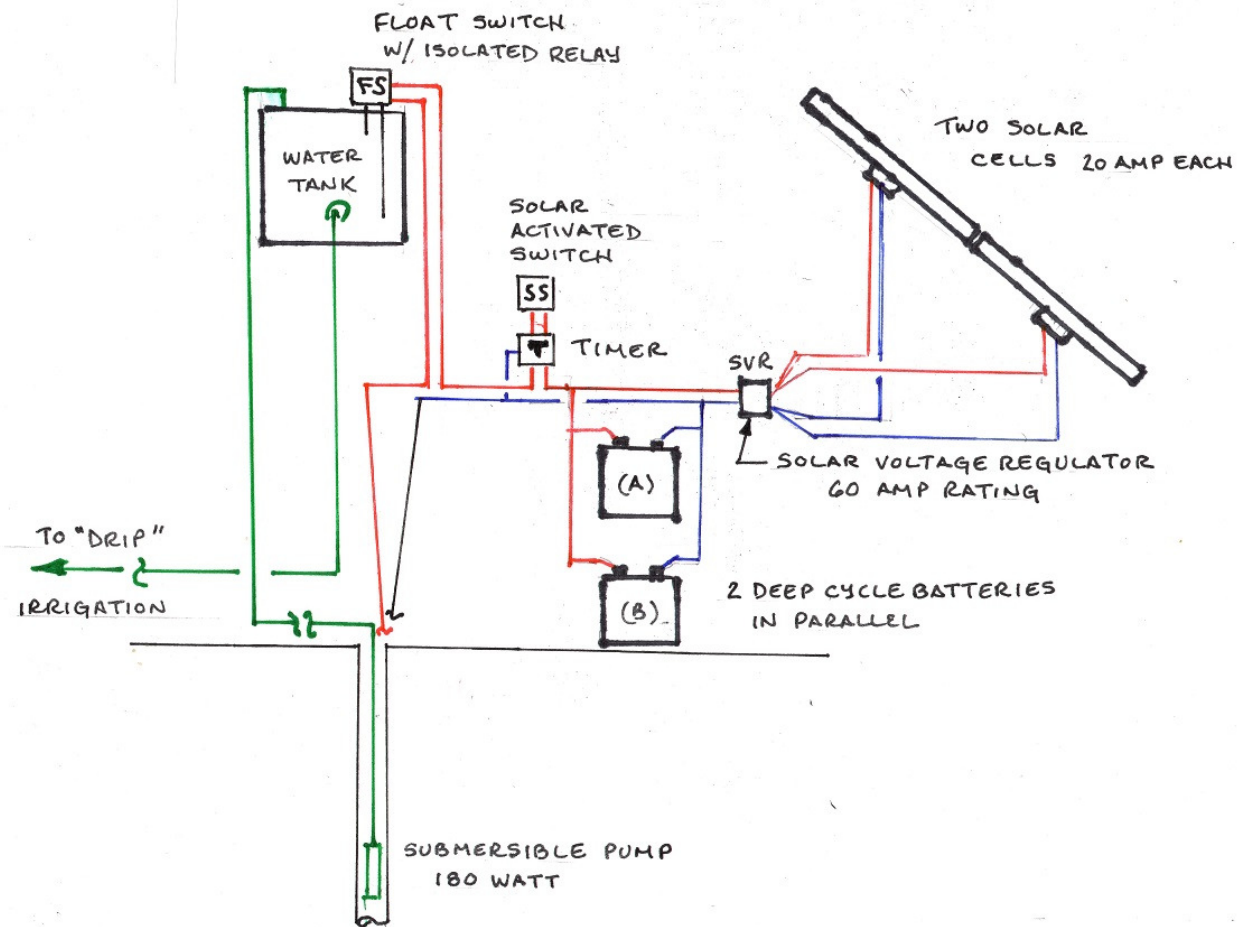
As a starting point, determine the gallons of water required per day. Size the pump accordingly and purchase solar panels to provide sufficient Amps. Purchase a 'solar voltage regulator' not a 'regular voltage regulator.'

Be sure to carefully balance the 'drip' flow rates at each tree and throttle down on the flows to nearest 'drip' outlets to ensure delivery of water to the furthest tree. The sum-total of all the connected 'drip' outlets should not exceed 85-percent of the pump's capacity. Long distances in the distribution system may require the storage tank and pump to be raised in height or a larger capacity pump to be installed.

A multiple zone irrigation timer (controlling start time & duration of individual zones) connected to solenoid zones valves may be warranted on larger systems. Larger systems may also require multiple water tanks, tank discharge pump, with on/off tank level control and more solar panels.

Remember: Consult a professional before attempting to install your solar irrigation system. Make sure not to cross the positive and negative wiring connections. Electricity and water do not 'mix,' therefore be extremely careful when working around all electrical components.

Refer to the basic System Diagram, with its key components, on the following page.



Legend: Green = water piping,
 Red = positive 12 Vdc wiring,
 Blue = negative 12Vdc wiring

BASIC SOLAR POWERED IRRIGATION SYSTEM WITH KEY COMPONENTS

The FLORIDA STATE COTTAGE FOOD LAW

From: **Jessica Mendes Ryals, Sustainable Food Systems Agent,
 UF/IFAS Extension, Collier County**

Brochure from the Florida Department of Agriculture and Consumer Services (FDACS) on the Cottage Food Law: <https://www.fdacs.gov/Business-Services/Food-Establishments/Cottage-Foods>

This law allows individuals to use their unlicensed home kitchens to produce for sale of *certain* foods that present a low risk of foodborne illness.

Cottage food operators can produce and sell these products directly to consumers without obtaining a food permit from the Florida Department of Agriculture and Consumer Services. Gross sales for a cottage food operation must not exceed \$50,000 annually.

Please review the approved items for processing and selling below, it is very limited. Also note that a cottage food operation must comply with all applicable county and municipal laws and ordinances regulating the preparation, processing, storage and sale of cottage food products.

Main page: <https://www.fdacs.gov/Business-Services/Food-Establishments/Cottage-Foods>

FEBRUARY CALENDAR OF EVENTS

- Tuesday 4 Monthly Meeting: Caloosa Rare Fruit Exchange, 7:00 PM, Fort Myers-Lee County Garden Council Bldg., 2166 Virginia Ave., Fort Myers.
- Tuesday 11 Monthly Meeting: Bonita Springs Tropical Fruit Club, Tasting Table 6:45 PM, Meeting 7:00 PM: Revive Wellness Center, 3521 Bonita Bay Blvd., Bonita Springs. On Route 41, opposite Terry Drive, turn onto Bonita Bay Blvd. Bear left before the entrance to the gated community, then turn right into the Bonita Bay Executive Center. This will be an organizational meeting.
- Wednesday 12 Monthly Meeting: Rare Fruit Council International, Miami, 7:00 PM in the Science Village Classroom next to the Butterfly Exhibit at Fairchild Tropical Botanic Garden, 10901 Old Cutler Road, Coral Gables.
- Friday 14 Valentine's Day "Heart Healthy" market, 11:00 AM to 2:00 PM, The Florida Dept. of Health in Collier County, 3339 East Tamiami Trail, Naples, FL 34112, (239) 252-2684. Looking for vendors, setup at 10:00 AM, contact either: Reggie Wilson, 239-252-2594; reginald.wilson@FLHealth.gov or Melissa Peacock 239-252-2684; Melissa.peacock@FLHealth.gov
- Saturday 15 UF/IFAS Community Garden Tour, starts at 8:00 AM at the UF/IFAS Collier extension Service, Cost \$15 includes transportation and lunch. Visit NBG, Cultivate Abundance Community Garden, Cornerstone Community Garden. To Register and More Information: <https://colliercommunitygardentour2020.eventbrite.com>
- Tuesday 18 Monthly Meeting: Collier Fruit Growers, Tasting Table 7:00 PM, Formal Meeting 7:30 PM: Tree of Life Church, Life Center, 2132 Shadowlawn Drive. Stephen Cucura will be the speaker.
- Tuesday 25 Workshop: Bonita Springs Tropical Fruit Club, 6:45 PM: Revive Wellness Center, 3521 Bonita Bay Blvd., Bonita Springs.
- Saturday 29 Fruit Tree Sale - Collier Fruit Growers: 9:00 am to 2:00 pm, Freedom Park, 1515 Golden Gate Parkway, Naples. [Remember 2020 is a leap-year]



Fruits which Ripen in February:



Avocado, banana, black sapote, canistel, carambola, citrus, coconut, guava, macadamia nut, mamey sapote, papaya, sapodilla, soursop.

Annual Fruits: Eggplant, winter squash (Cushaw/Seminole pumpkin), pigeon pea, bell pepper, tomato

General Newsletter Publication Notes

Someone is needed to prepare and submit the monthly food recipes. In the meantime, recipes from prior newsletters will be republished each month. If you have a favorite recipe, please submit it for the newsletter.

Members are encouraged to submit articles and news worthy items to rtaylorrm@comcast.net for publication in subsequent issues of the newsletter.

A combined April/May issue of newsletter will be published due to limited resources and prior commitments of the staff.

As in 2019 there will be no newsletter published for August.



Bonita Springs Tropical Fruit Club



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:

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 Wellness Center, **3521 Bonita Bay Blvd.**, Bonita Springs.

Workshops:

Workshops (monthly discussions) are held on the *fourth Tuesday* of each month at **7 PM** at the Revive Magazine, 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.



Bonita Springs Tropical Fruit Club



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



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

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!

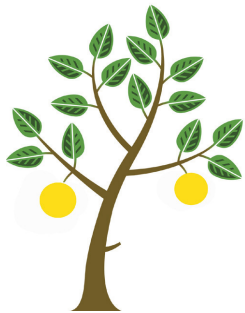
2020 CFG BOARD OF DIRECTORS

OFFICERS:

President, Rodger Taylor - 239-384-9630
Bonnie Hawkins, Vice President
Melissa Parsons, Treasurer
Lisa Hare, Secretary

DIRECTORS AT LARGE

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



VISIT US AT:
www.collierfruit.org



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

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.



Bonita Springs Tropical Fruit Club

Membership Application / Renewal Information Update Form

www.bonitaspringstropicalfruitclub.com - PO Box 367791, Bonita Springs, FL 34136 - bonitafruitclub@gmail.com

Dues are \$15 per person or \$25 per household. Name tags are \$6 each.

Dues are for one year, January - December, payable at meetings or by mailed check. New members joining in November or December will be credited for the full following year.

Date: ____/____/____ How did you hear about us? _____

Name: _____ (circle one) Snowbird (seasonal) Local

Spouse: _____ Do you live in an HOA? _____

Address: _____

Phone: (____) _____ - _____ City State County

Email: _____ @ _____

Dues received: cash _____ check _____ By whom? _____

Tell us a little about you. **Please write clearly and legibly.**

What do you grow? _____

What do you want to learn? _____

Where have you lived previously to SW Florida? _____

Other hobbies, interests or talents that you might have to share? _____

Please check any committees that you can join:

- Hospitality** - Coordinate food, drinks, greeters.
- Marketing/Networking** - Advertising, networking with other organizations for events, fundraising, etc.
- Advisor/Educator** - Just as it sounds; advise and educate new, old, and young growers.
- Membership** - Finding new members, maintaining member updates, sign-in/out at meetings.