LOS ANGELES CHAPTER

2022 Volume XXVII Issue 2

CRFG-LA meetings at Sepulveda Garden Center are currently suspended. We hope everyone is staying safe and healthy.

1st Annual Tony Stewart Fruit Tree Symposium
Saturday, March 26
Location: Sylmar High School
Potluck lunch begins at 1:00 pm
School tours begin at 1:30 pm
(PLEASE NOTE THE UNUSUAL TIME!!)

Sylmar High School Agricultural Department head Steve List invites us to a potluck lunch and tour of their amazing facility. The growing areas were built up from an empty lot by students over many years, and is now a magnificent, multi-zoned field of dreams, with areas for fruit trees, hot houses, chickens, desert plants and more. There will be information on fruit tree growing, garden tours, and delicious food. The Symposium is named in memory of our wonderful CRFG-LA chapter chairman, Tony Stewart, who passed away unexpectedly in 2019.
Please bring a dish to share that will feed at least 6 people.

IN-PERSON GARDEN TOUR
Saturday, April 23, 10:00 am
Garden Tour: Aura Carmi, private residence
Location: to be provided

"I am looking forward to hosting my friends from the CRFG. I have 2.5 acres planted in fruit trees, ornamentals such as camellias and roses, and California natives.
"In the orchard, I have some CRFG favorites such as white sapote, quinces, jujubee and loquats and also some more unusual varieties such as lucuma and pawpaw. I have several varieties of citrus, mangos, pomegranates, apples, pears, blueberries and more. I grow organic and give minimal care, and they live and thrive and fruit! On my property, we must battle fierce wind, thick fog, and now, heat and drought. I am happy to say that my garden and I - so far - are winning!
"Please come with stout walking shoes, as I have uneven ground. The main garden tour will be on the top acre. For those who are good walkers and able to go up and down my steep hill trail, I will be happy to walk down and continue the tour.
"As for Covid restrictions, we will be outdoors, so masks are optional. However, please be courteous and keep a good distance from me and everyone else. Also, if you wish to use the restroom in the house, you will need to put a mask on properly, covering nose and mouth."
We are also planning a potluck for this event, so please bring something that will feed at least 6 people.

Save the date!
CALENDAR FOR LA CHAPTER 2022

May 21	Garden Tour: La Verne Nursery
June 25	CRFG Annual Plant Sale
July 23	Garden Tour: Conejo Valley Botanic Gardens
August	No Meeting - Fruit Festival
September 24	To be announced
October 22	To be announced
November 19	To be announced
December 10	Holiday Party

http://www.crfg-la.org

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LOOKING BACK

By Deborah Oisboid, Editor

January 22 – Annual Scion Exchange

After another year of virtual meetings, it was wonderful to have an in-person event again, albeit with a few restrictions due to the looming health problems caused by the Omicron variant. The Scion Exchange was held outdoors at a private residence, and we are very much indebted to Eve Guth and Edward Livingston for once again sharing their lovely yard with us.

So many rules! We all wore masks, even though we were outdoors; we had to maintain 6 feet distance minimum; no more than 6 people could be around any table; there was no food table, and so on. Still, everyone took the restrictions in stride, and it was a calm and relaxed event.

As members arrived, they dropped their scions at the tables near the gate, and walked to the rear of the property. While the cuttings were being sorted at the front, Bill Brandt demonstrated several grafting methods to the members in the back yard. Several people even donated some potted plants, and we held a small plant sale, thanks to their generosity!

For those who couldn't attend, Bill worked with Emory Walton to create four very helpful videos, which you can find online at the CRFG photo album:

http://www.crfg-la.org/piwigo/index.php?/category/60

After the grafting presentation, it was time to sample the Scions! With more than 30 people attending, there was still a lot to choose from: from Acerola Cherry to Yellow Long-necked Figs. In fact, there were so many fig varieties and quantities that we had to assign one whole table exclusively to figs!

The plants for sale included coffee, loquat, and sapote seedlings; several baby banana pups, and a white pineapple.

It was great to socialize with friends again and catch up with each other. Everyone had a good time and left with new treasures to add to their gardens.

The remaining scions were divided – half went to the West LA chapter, and the other half went home with the newsletter editor, and were made available to members after the event was over.

February 26 – Lychees

We had an amazing lychee expert as our February speaker. Dr. Jonathan Crane is an authority on tropical and subtropical crops, with more than 30 years' experience. He is a tropical fruit crop specialist with the University of Florida IFAS.

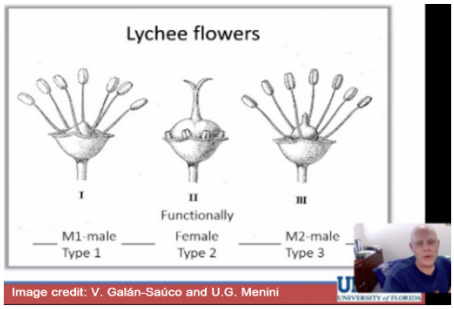
There is so much to learn about lychees! Lychees are in the Sapindaceae family, which also includes longan, rambutan, pulasan and akee. Lychees are native to the subtropical areas of southern China, North Vietnam, and Malaysia. In fact, you can still find feral trees in south China., in lowlands and elevated rainforests. Trees require exposure to cold, non-freezing temperatures.

Lychees are grown across southern Florida, and sometimes in the interior as well. The trees closer to the north of the state have better fruit bearing properties. There are approximately 700 acres of Florida land producing lychees, with the most acreage in Miami-Dade.

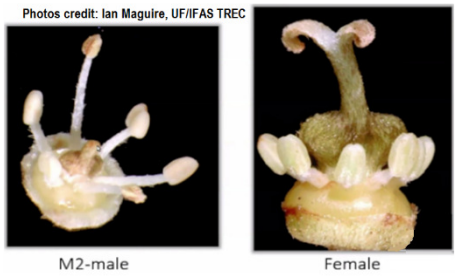
The general structure of a lychee tree is polyaxial, which means they have multiple stems. Plant growth alternates between roots and shoots, as well as between vegetative

and reproductive. In other words, when roots are growing, shoots aren't growing and vice versa. Also, it's either growing flowers or leaves but not both. Finally, the fruit does not ripen further after harvest, unlike other fruits. So always check your lychees to make sure they're at their sweetest before picking them!

Lychee flowers come in three genders, all growing within the same flower cluster (panicle):



Type 1 = M1 = functional male
Type 2 = Female = functional female
Type 3 = M2 = functionally female with nonfunctioning (male) anthers



M2-male Female

Although all three types of flower grow within the same cluster, they open at different times. There needs to be some overlap between open male & female flowers for a tree to produce fruit. The alternative is to have multiple trees growing flowers at the right times.

Flowers grow on mature shoots, which contain mature, fully hardened off leaves. Mature shoots look visually dormant ("quiescent") during cool months.

Optimum flowering and fruiting occur in climates where leaf growth stops when cooler temperatures set in (after the summer flush). The quiescent, mature shoots need to be exposed to 2 – 5 months of cool (not freezing) temperatures between 59 – 68F, followed by moderately warm temperatures in the spring when the flowers open. As the fruit develop, they need moderately high temperatures.

During the cool, quiescent period, if warm days intervene (above 68F for more than 2 hours), the flower-inducing period restarts. So, fluctuating winter temperatures will impede flower production. Also, if winter temperatures are too warm, you will get more leaves and fewer panicles.

The optimum temperature for flower pollination is 66-72F. Temperatures below 59F will inhibit pollen tube growth. Terminals (shoot ends) need to get enough sunlight for flower production. (Don't let your tree get too big or too dense.)

One of the best ways to improve fruit production is to synchronize the tree growth pattern. You want all the shoots to produce leaves at the same time, then flowers at the same time, and finally fruit. You can control this by pruning the entire tree back after harvest. Asynchronous growth - when shots are in different stages of growth – will reduce fruit production. Therefore, you should prune annually, trimming mostly small diameter wood (2.5 - 3cm dia). If you cut large diameter branches, your growth will be uneven. Ideally, you want new growth starting everywhere at the same time.

Watering at the right time is also very important. Lychees use very little water in wintertime when they are quiescent. They like moisture while flowering and fruiting.

The amount of water should be appropriate to each growth phase. Maintain soil moisture from flower onset, increasing it from fruit production through harvest. Reduce/minimize irrigation from harvest until flower onset the following year.

Fertilizer should only be applied on an as needed basis. In particular, do not over-apply nitrogen or you will get more leaf growth and fewer flowers. Maintain all other nutrients at non-limiting levels.

Finally, keep the tree pruned to an appropriate size for canopy light exposure, as well as ease of harvest. A shaded tree may flower but will probably not produce fruit.

Dr. Crane said lychee flowers are predominantly pollinated by insects, mostly honeybees. (Another CRFG member mentioned his lychee flowers are more often visited by flies than honeybees, although both are present in his yard.)

Other good horticultural practices include mulching (especially with leaf litter), avoiding nitrogen application after harvest (it starts leaf growth too soon), applying potassium to improve fruit size and retention, and interplanting different varieties to ensure good (cross) pollination.

Lychees have several known pests, such as the lychee webworm, Lychee bark scale, red alga, Anthracnose, mealy bugs, and mites. Dr. Crane suggests you allow "natural" predators to work, while monitoring your trees and using the least disruptive insecticides if needed. There is one major exception.

The most dangerous pest is the Lychee Erinose Mite (LEM, *Aceria litichii*), which is highly infectious. It was detected and eliminated twice before, in 1955 and again in in 1993, but it came back in 2018 and decimated Florida's Lychee production, reducing it by 70-80%. The Florida Department of Agriculture has much of the state on high alert, and several counties under quarantine for LEM. So far, Dr.

Crane is not aware of any sightings in California, but it does not hurt to keep an eye out for it.

Symptoms of LEM infestation include distortion and discoloration of young, immature leaves (causing silver-white areas or small blisters); elevated, puckered surfaces on tender leaves, and the erineum (reddish-brown) felt-like masses on the undersides of leaves. These symptoms can

All photos, credit to: J.H.Crane

spread onto the fruit, although the pest is more attracted to young growth. Mature leaves seem to be able to resist the fuzzy brown erineum.

The LEM spreads in many ways: by wind, by hitchhiking onto honeybees, through plant propagation (air layering can pick up mites and they move with the new plant to a new growing area), on garden tools, and even on clothing!

Although LEM has not yet been observed in California, some growers order lychee trees from other locations. Be particularly careful if you're buying from Florida. Make sure the tree has been thoroughly inspected and has a certificate of cleanliness from FDACS. Fortunately, LEM does not attack any plants other than lychees.

Erinose mite (circled) among the hairs of the felt-like erinum on a lychee leaf. Photo credit: G.Bauchan, SEL-USDA

If you see any evidence of this pest, PLEASE REPORT IT IMMEDIATELY - especially if you see the furry brown felt on the leaves of your lychee tree. If symptoms appear, Dr. Crane recommends burning the plant. Do **not** move LEM-infested plants outside of their grove. If you trim an infected tree, take a shower before moving to the next tree!

To prevent this pest, you need to inspect your trees frequently, especially new leaf growth. Familiarize yourself with the symptoms, because you will not be able to see the mite itself, A hand lens may be helpful - you can't see mites but might catch early symptoms. Keep your tools clean, using a 10% bleach solution to sterilize them between trees. If you suspect Erinose Mite, you might even want to change clothing before moving to the next tree.

Remove any infestations, destroy infected growth, and disinfet your clothing (10% bleach) before contacting other lychee trees, ("Destroy" means chip, burn, or bury/cover infected growth.)

When pruning, spray newly trimmed branches with sulfur (20 lbs per 100 gallons). Harvesting also induces new growth, so apply sulfur after harvest as well!

After cautioning us in great detail about LEM, Dr. Crane started answering our questions. Bill wanted to know how to encourage an air layered cutting to thrive after rooting. Warm temperatures (>70F), and about 20-50% shade should help. Dr. Crane sets his air layered roots in mild fertilized water, and places newly cut saplings in a greenhouse.

Matthew asked if placing bags of ice around the drip line might help induce flowering. Dr. Crane didn't think it would.

Sagi was interested in Lychee's cousin, the Longan. Apparently, exposure to cool temperatures is less critical. You need to control nitrogen and water, and don't let the tree overgrow. To induce longan flowers, the tree must be dormant for > 2-6 weeks (a longer dormancy is better). You can treat it with potassium chlorate applied as ground drench or as a foliar feed. Irrigate as the weather warms up and, depending on temperatures, the tree should initiate flowers in 2 – 4 weeks

Bruce asked about the root system of lychee trees. Most lychees are propagated by air layering, and air layered trees tend to have shallower roots. Seedlings typically grow slightly deeper roots. However, there is no standard rootstock for lychees.

There was some talk about visiting Dr. Crane in Florida. We learned that there is a driving tour which takes 1 hour, and a walking tour which lasts about 2 hours. Trams can hold about 25 people.

It was an incredibly informative presentation and we learned so much about lychees. We are grateful to Dr. Crane for his excellent presentation. Thank you very much!

Classifieds

WANTED: Your gardens and ideas. CRFG-LA is looking for a few good events. Would you be interested in sharing your garden for a tour in 2022? (Via Zoom or in person.) Do you know of any places to visit? Any experts to teach us? Let us know! editor@crfg-la.org