



NEWSLETTER

JULY 1981

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

NOTE.....THE JULY, AUGUST & SEPTEMBER MEETINGS WILL BE HELD ON THE
SECOND SUNDAY OF THE MONTH.

NEXT MEETING.....SUNDAY, JULY 12, 1981 at 2:00 PM

MEETING PLACE.....CONSTANTINE HOUSE, LAKE LECLARE, NORTH TAMPA

PROGRAM.....An In-depth Look at Home Grape Growing, Wine Making and
Champagne by Daniel Smith Mills, Enologist.
Mr. Mills works with Ed Grosz at Ed's "Florida's Vineyard
and Fruit Garden", Orange Lake (between Ocala & Gainesville).
There will be samples of Stover White and Noble Red wines
for tasting.

A REQUEST

Wes Wilkinson, 115 S. Saturn, Clearwater needs a ride to the meetings. Will someone
kindly help out here? His phone number is 446-0019

Since our chapter's beginning, we have gratefully enjoyed the use of the Constantine's
house on Lake Le Clare, but it is an imposition on Joe and Jane, especially because of
the hauling of extra chairs and the clean-up afterwards. With our membership growth,
we run the risk of insufficient seating if more than 40 people show up.

On May 19th, an informal delegation consisting of Irene and Paul Rubenstein, Bob Heath
and your editor met with county extension agents at the Hillsborough County Agricultural
Business Center in Seffner. We discussed the possibility of using meeting room facilities
in their building. This location is very accessible, on SR 579, just south of Exit 10
on Interstate I-4. The only problem is entry and lock-up due to our Sunday meeting time.
It is up to the Executive Board, but perhaps we can try it out for our September 13th
regular meeting. Watch the newsletter for the announcement.

We are invited to plant specimen trees of our choosing on the building's grounds. This
would be a very interesting and worthy project for our group. We would be following the
precedent set by Palm Beach and Broward (RFVC) who have plantings at their respective
county buildings. Miami has a project at the USDA station.

Report of June 7, 1981 Meeting

There was no business meeting. The program was held at the University of Florida, IFAS
Agricultural Research Center, Leesburg. Our hosts were Dr. Gary W. Elmstrom, Center
Director and Associate Horticulturist, and Dr. James M. Crall, Plant Pathologist and
former Director. Approximately 30 members and guests attended - very disappointing in
view of our 150+ membership. The Leesburg staff went to much trouble to accomodate us,
especially Dr. Elmstrom, who gave up his own Saturday as well, to prepare for us. You
who missed this outing also missed the enjoyment of eating the best cantaloupe and
watermelon in existence. And you could have taken home all that your car could hold.

We are very much indebted to Dr. Elmstrom for these two Field Days (1979 & 1981) at Leesburg, as well as for the programs given at Lake Le Clare in our first year.

Dr. Elmstrom spoke to us on the work being done at the Leesburg A.R.C. This included:

1- Watermelon Drip Irrigation Trial.

Purpose: To study watermelon growth and development using drip irrigation.

Procedure: Drip irrigation using biwall tubing was compared with no irrigation /very apropos in this severe drought year/ and with overhead irrigation. All fertilizer was soil applied in the non-irrigated and in one of the overhead irrigation treatments. A portion of the fertilizer was applied through the irrigation system for the other overhead irrigation treatment and with drip irrigation. In addition, two in-row plant spacings were used: 2.5 ft and 5ft.

Results: Incomplete

2- Watermelon Seed Priming/ Earliness Trial

Purpose: To hasten seed germination in the cold soil in early February.

Procedure: Watermelon seeds were primed in 1.5% KNO_3 + 1.5% KH_2PO_4 for 5 days at 68°F. in aerated solution. After treatment the seeds wererinsed thoroughly with water and dried slowly at room temperature. A special slitted row cover was used in some treatments. Varieties used were "Sugarlee", "Jubilee" & "Triple Sweet". The earliest planting date was 2/10/81.

Results: Germination in February was hastened by seed priming and/or row cover.

In March, when soil temperature had increased, no differences were noted. Female blossoms developed earlier on plants from primed seed and/or those protected with row cover.

3- Watermelon Variety Trial

The results for 1981 are still incomplete. "Charleston Gray", "Jubilee" and "Crimson Sweet" are still the standard varieties for Florida. Small sized "ice box" melons are being bred and tested at the Leesburg A.R.C. Presently there are no commercial "ice box" varieties suitable for growing in Florida on anything but virgin land (due to disease susceptibility). This small size is ideal for shipment in cartons and for export. "Dixielee" (late maturing) was released from Leesburg in 1979 and "Sugarlee" (early maturing) will be available for 1982. "Yellow Baby" shows promise as an "ice box" melon with yellow flesh.

4- Cantaloupe Variety Trial

The 1981 results are also incomplete. The best commercial varieties have been "Saticoy" and "Super Market". "Earlidew", a new hybrid honeydew, is recommended highly.

5- Watermelon Sugars

The qualitative and quantitative differences in sugar content of several watermelon varieties at various stages of maturity was studied. In 1976, "Smokylee" and "Dixielee" tested sweeter than "Charleston Gray" and "Crimson Sweet". In 1979, sugar analyses were taken at 4 day intervals from 12 to 36 days after anthesis (full bloom of flower) on 8 different varieties. Fructose content was highest 24 days after anthesis for all varieties except "Dixielee" and "Calhoun Gray", which peaked at 32 days. The continued increase of fructose in maturing fruits is important because of its relative sweetness /fructose is twice as sweet as sucrose, but is not found in table sugar since it has a poor baking quality compared to sucrose/.

6- Also mentioned were growth regulator trials and minor element trials on watermelon and breeding of cantaloupe.

Dr. Crall gave us a history of the Leesburg A.R.C., which was established in 1929, and explained the goals of the continuing programs in watermelon breeding. Following the formal program, Dr. Elmstrom and Dr. Crall cut up a number of watermelons, cantaloupes and honeydew melons representing the various cultivars discussed. Everyone present got to sample these to their hearts' content. They were all delicious and a most welcome treat on a very hot day. It is a shame one cannot buy quality melons like these at area supermarkets, fleamarkets and roadside stands. Despite the exorbitant prices charged for the inferior goods sold, the pressures of commerce apparently dictate growing only varieties that produce quantity, not quality. And all the growers seem to pick far too early before the sugars have formed in order to get a faster buck. Thus it is the same story as with mangos, avocados, peaches, plums, etc. You are forced to grow your own if you want a quality product.

There were more melons than we could haul away in our cars and we should remember that they did not get there from the fields all by themselves. Again we thank Dr. Elmstrom and staff for a most enjoyable day.

PIGEON PEA
(Cajanus cajan)

The pigeon pea is a short-lived tree (5 or 6 years in frost-free areas) reaching a height of ten feet. The peas are produced in pods, three to eight peas to the pod, and are about $\frac{1}{4}$ inch in diameter. The pods are very easy to open when they are dry. If left on the tree they will pop open spontaneously at the proper time and plant themselves. The tree may be damaged by frost and may be killed at 22 degrees F.

Under normal conditions the tree will bear the year planted and all summer through subsequent years. The dried peas may be kept through the winter and planted in seed beds in February, then planted outside in mid-March or later. The tree will grow rapidly in good soil, likes water, but will stand drought. Limbs are long and slender, becoming pendulous under good conditions.

There are two varieties. The most common from Central America is brown when dry. A larger variety from Kenya is a marbled rust color. The flavor is different, more like peanuts or soybeans than English peas. They may be boiled like other dried beans with ham, or used in soups. The young green seeds are eaten as a vegetable in many countries and have been canned in Puerto Rico and Trinidad. The green pods are sometimes used as a vegetable, also. The plants are used as excellent cattle fodder and also can be made into hay and silage. Pigeon peas are planted as green manures and cover crops, used as temporary shade, wind-breaks and for erosion control. The dried stalks are used for firewood, thatching and basket-making in India.]

(Submitted by Bob Heath)

How about a fruit that is only surpassed by the banana, date, and fig for food value, which can be picked green and hard, and will ripen in the house with no loss in quality? Better yet, it will grow trouble free in your backyard and is about the size of an orange tree. I got tired of hunting through a half dozen references for information on this tree (the White Sapote or Casimiroa), so I combined them all into one monograph printed on the following pages. Not a lot has been written about this tree in the past. We are now eating ripe fruit from my tree (variety: "Dade") as I write this (June). The January freeze destroyed 2/3 of the fruit, but we still got several hundred in all sizes from 25c piece to larger than an orange. Most had only 1 or 2 viable seeds.

THE WHITE SAPOTE
(Casimiroa edulis)

Also known as the Mexican Apple, Matasano or plain Casimiroa, this medium size evergreen tree is native to the Mexican and Central American highlands. Although in the Rutaceae family, the White Sapote is not in the same subfamily, Aurantioideae, as citrus, but in the subfamily next to it, Toddalioidae. Thus, it is not close enough to citrus to hybridize or be graft-compatible with any of its species. Like citrus, however, Casimiroa contains an aromatic turpentine-like substance. The use of the name sapote is unfortunate, since it has no relationship to the true sapotes in the family Sapotaceae. Neither is there any relation to the so-called Black Sapote, which is a persimmon relative in the family Ebonaceae. The White Sapote, accordingly, would be better served by the use of its generic name, Casimiroa.

Sometimes erect, but usually of spreading form to thirty feet (10 m) in height and to thirty feet in width, Casimiroa trees should be planted at least twenty feet (6 m) apart. The irregular branches have glossy green, palmately compound leaves with five to seven leaflets. It makes a good ornamental subject. Although it is evergreen, in California there may be a period of complete leaf fall in May or June or even earlier should there be frost enough to cause much leaf abscission. The thick gray bark is rough and covered with conspicuous lenticels (small whitish excrescences).

The abundant flowers, small and pale green, are borne in panicles of 15 to 100 or more. In Central Florida, flowering normally occurs from November to March and to some extent throughout the year, especially on girdled wood. In California, blossoming occurs mainly from spring to midsummer.

Being self-fertile, even lone Casimiroa trees can be prolific bearers. Literally hundreds of fruits may mature on select trees. In Florida, fruits begin maturing in May. The harvest begins in September in California. Fruit size is variable, from one to four inches (2.5 to 10 cm) in diameter, or from tomato to orange size in range. When ripe, fruit color is green in some varieties, and in others is yellow, golden, or perhaps having a streak of bright orange or yellow. The inedible skin is very thin and, when ripe, easily torn. The off-white to yellow flesh is soft and buttery, agreeably sweet in the better varieties, but with a slight resinous (bitter) or turpentine flavor that characterizes the fruit. This flavor may be excessive in a few varieties, making it objectionable to some palates. The "Dade" variety, among others, seems to lack this bitter characteristic. There are from one to six rather large oval or elliptical seeds embedded in the center of the fruit. Historically, the raw seeds have been regarded as poisonous, but have been used in medicinal preparations.

Rich in vitamins C and A, the Casimiroa is a dessert or salad fruit to be eaten fresh. A sweet preserve has been made of it, but never achieved much note. Also rich in carbohydrates and proteins, Casimiroa fruit is ranked (pound for pound) next to the banana, date and fig for food value. With cream and sugar, a good variety will perhaps surpass the banana in flavor and texture.

The fruit may be picked when mature, but not fully ripe, as it will then ripen indoors with little loss in flavor, usually in about five to eight days. If left to ripen on the tree, it will drop, damaging or destroying the fruit. It can be exploited commercially if the fruit is picked early while still green and hard and then shipped rapidly to arrive before softening.

Definitely subtropical in climatic requirements, the Casimiroa has been successful in southern and central Florida and also southern California. It seems to be as hardy as most citrus, but less so than Satsuma and Kumquat. The tree and foliage will stand at least as much cold and frost as Guatemalan avocado varieties. Tip damage and loss of young leaves may occur with a few degrees of frost. A hard freeze may defoliate the

entire tree, but regrowth is very rapid in either case. Killing temperatures have not been published or studied extensively, but the central Florida freezes of January 1977, March 1980 and January 1981 were not fatal. Even the record setting lows of December 1962 were merely damaging.

Unfortunately for central Florida growers, the normal blossoming season coincides with the freeze danger period. In California the frost danger is usually past before the flowers open. Winter freezes, however, may damage the young inflorescences before they are easily seen. Re-flowering is easily induced by girdling in any season.

Casimiroa trees grow vigorously in the coastal districts of Southern California where the mean temperature from April through October is about 65 degrees F. (18 C.). They do not, however, tolerate the cooler conditions (57 to 58 F. or 14 C.) of the San Francisco Bay area. Cool dry winters seem to induce a better dormancy and to improve the fruit set.

The Casimiroa or White Sapote is most content in a slightly acid, rich loamy soil. Alkaline soils cause severe mineral deficiencies. A generous amount of compost should be added to planting holes in deep sandy acid soils. With good drainage it can be grown on clays. Low wet soils discourage fruiting. Nitrogen fertilization requirements seem to be average, but not as strict as for the orange. Young trees need plentiful water for rapid growth. The mature tree is drought resistant, but responds to irrigation like citrus. Watering should be limited during dormancy, however. Unlike citrus, mulching is recommended in order to improve soil moisture retention and to decrease weed competition, especially in the case of young trees.

Seedlings do not come true to the parent, so select varieties of Casimiroa are propagated by grafting, budding and air layering. Seedlings usually require six or more years to bear fruit. Due to the short period of viability, seeds must be planted soon after removal from the fruit. Plant one inch deep in a light porous soil mix. Germination takes three to four weeks. If seedlings are to be grown to maturity, the terminal bud should be removed before the plant reaches three feet in height. Otherwise the tree may grow ten feet or more before branching. Three or four laterals should be encouraged and they, in turn, should have their terminal buds removed when one to two feet in length. Vegetatively propagated trees also should be headed back in this manner upon planting.

Shield budding, as is practiced on avocados, is one common method of vegetative propagation. The seedling understock should be about 3/8 inch in diameter (1 cm) at the base. Branch ends of fairly mature wood which have acquired the ash-gray coloration, ^{or} suitable for budwood. Spring and summer are the best times for most active growth. At mid-summer, when the cambium is very active, topworking can be performed using the side bark graft. The scion may be growing within three weeks.

Another variety or species (*C. tetrameria* in some literature) is referred to as the Woolyleaf White Sapote. It has larger leaves with soft pubescent undersides. The fruit of the propagated varieties of Woolyleaf White Sapote or Matasano is considered by some to be superior to that of the smooth leaf varieties. The Matasano fruits are larger, generally with fewer seeds, giving proportionally more flesh. They may approximate grapefruit in size.

Deserving of more widespread use as a dooryard fruit, Casimiroa species also need more study and development. Being evergreen, of medium size, relatively hardy, and a good ornamental subject, the Casimiroa or Matasano should fit into most any landscape. It also has much potential as a pot plant (tub culture) and as an espalier specimen.

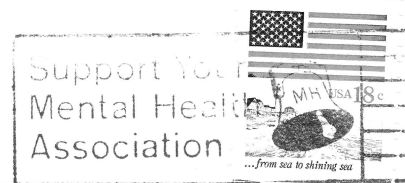
R. S. Thorndike

Bibliography:

- Chandler, William H.: Evergreen Orchards, Second Edition,
Lea & Febiger, Philadelphia, 1958
- Maxwell, Golby and Will: Florida Fruit, Lewis S. Maxwell, Publisher,
Tampa, 1967
- Popenoe, Wilson: Manual of Tropical and Subtropical Fruits,
Macmillan Company, New York, 1920
- Simmons, Alan E.: Growing Unusual Fruit,
Walker & Company, New York, 1972
- Sturrock, David: Fruits for Southern Florida,
Southeastern Printing Co., Stuart, Fla., 1959

The membership ought to be aware that our newsletter is circulating far and wide. Complimentary copies are sent to other chapters, organizations and individuals we feel can benefit from the information given here and who, in turn, can benefit us. We have received very nice letters from the Palm Beach and Australian chapters, and also from the California Rare Fruit Growers (CRFG), all expressing a strong interest in cooperating with us. We are receiving their newsletters and in the future can draw on them for material. The Australian Chapter is also sending government bulletins for our information. In return, we are sending Florida Extension Service Fact Sheets, etc. Any of our members who should be traveling to California or Australia in the future are promised a warm reception by the groups there. In turn, we should offer the same hospitality to their members who might find themselves in Central Florida.

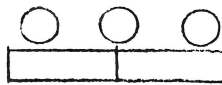
Tampa Bay Chapter Newsletter
Rare Fruit Council International, Inc.
3114 Troy Avenue
Lakeland, Florida 33803



P. Judson Newcombe
314 Deer Park
Temple Terrace, FL 33617

HOMER HESTERLY

REFLECT SALE



CHECK
APPROVAL

CITRUS

FRUIT DISPLAY

FRUIT & TASTING

MIXED
TROPICALS

BANANAS

POMEGRANATES

PERSIMMONS

SUPINAM
CHERRIES

BARBADOS
CHERRIES

PLUMS

PEARS

APPLES

PEACHES

LOQUATS

PECANS

MACADAMIAS

CHECK OUT

EXIT

MEN

MEN

JABOTICABA

CARAMBOLA

MANGO

AVOCADO

LONGAN

LYCHEE

KIWI

PINEAPPLE

SAPOTES

ANNONAS

GRAPES

PASSION FRUIT

INFORMATION
MEMBERSHIP
BOOKS

BLUEBERRIES

MULBERRIES

PAPAYAS

GUAVAS

FIGS

GINGER

HERBS

SMALL

PLANTS

WATER
COOLER

CARTS

WOMEN

ENTRY