



NEWSLETTER

DECEMBER 2000

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

EDITORS: BOB HEATH, THERESA HEATH, CHARLES NOVAK, LINDA NOVAK, JIM LEE, SALLY LEE

PRESIDENT: BOB HEATH

MEETINGS ARE HELD THE 2nd SUNDAY OF THE MONTH AT 2:00 pm.

THIS MONTH 1:00 pm

NEXT MEETING: DECEMBER 10

MEETING PLACE: UNIVERSITY OF S. FLORIDA, Bldg BSF100



PROGRAM: THE PROGRAM THIS MONTH IS OUR ANNUAL CHRISTMAS PARTY & COVERED DISH SOCIAL AT CLUB MEMBERS' DR. & MRS. BURNS & CATHY CREIGHTON'S FARM ON MIZELLE CREEK IN LYTHIA. This is a covered dish social and everyone is invited to bring something good to eat. We will meet at the Creighton farm on Mizelle Creek at 1:00 (SEE MAP ON PAGE 00-79.) We will have our usual plant raffle so bring plants for donating. There will be no formal speaker & only a little club business will be conducted. We will have a door prize & wine tasting, so all you little ol' wine makers bring your best. This is our 6th annual Christmas party and a great social event, so all try to come and help us celebrate.

NOTES FROM THE PRESIDENT

Our club has been very active this past year and I would like to take this opportunity to thank all those members who worked so hard and for long hours at the Citrus Celebration, at our Florida State Fair exhibit, at the spring U.S.F. Plant Festival, at the Tropical Fruit Festival at Sunken Gardens and at the U.S.F. Fall Plant Festival. Also an additional thanks for those who donate plants for the plant raffle and goodies for the tasting table. These are the ones who contribute so much to the club's success and deserve the gratitude of all the club members.

The 4th Annual Citrus Celebration is coming up in January. It is not too soon to begin baking tasty items using citrus for the tasting table at the Celebration. We will have recipes available at the Christmas party on Dec. 10 or you may use your own favorite citrus recipes.

Following is a list of important dates to mark on your calendar:

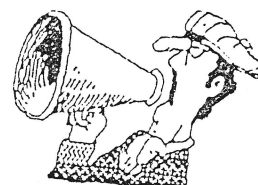
- Dec. 10 Christmas/Hanukkah Social at Dr & Mrs Creighton's home. Please note the festivities begin at 1:00 instead of 2:00 and please bring a covered dish to accompany the roast turkey & ham that the club will provide.
- Jan. 14 2001 12 noon til 3:00 p.m. A fun trip to George Riegler's home to pick citrus, enjoy barbecued hamburgers and socialize. More details in the January newsletter.
- Jan. 19 1:00 p.m. til 4:00 p.m. Set up tents and tables at U.S.F. Gardens and help unload citrus trees and tropical trees.
- Jan. 20 8:00 a.m. to 4:00 p.m. Citrus Celebration. We need everyone's help, so please show up and help wherever needed.

Please POST THE FLYERS.
(make extra copies if necessary)

Members Corner

FOR SALE: Executive attache case. American Tourister. New Condition.
\$20.00 Edith Freedman 884-1144

FOR SALE: Charcoal grill. Sunbeam - has vents top & sides, a red
cover & 4 legs. \$30.00 Edith Freedman 884-1144



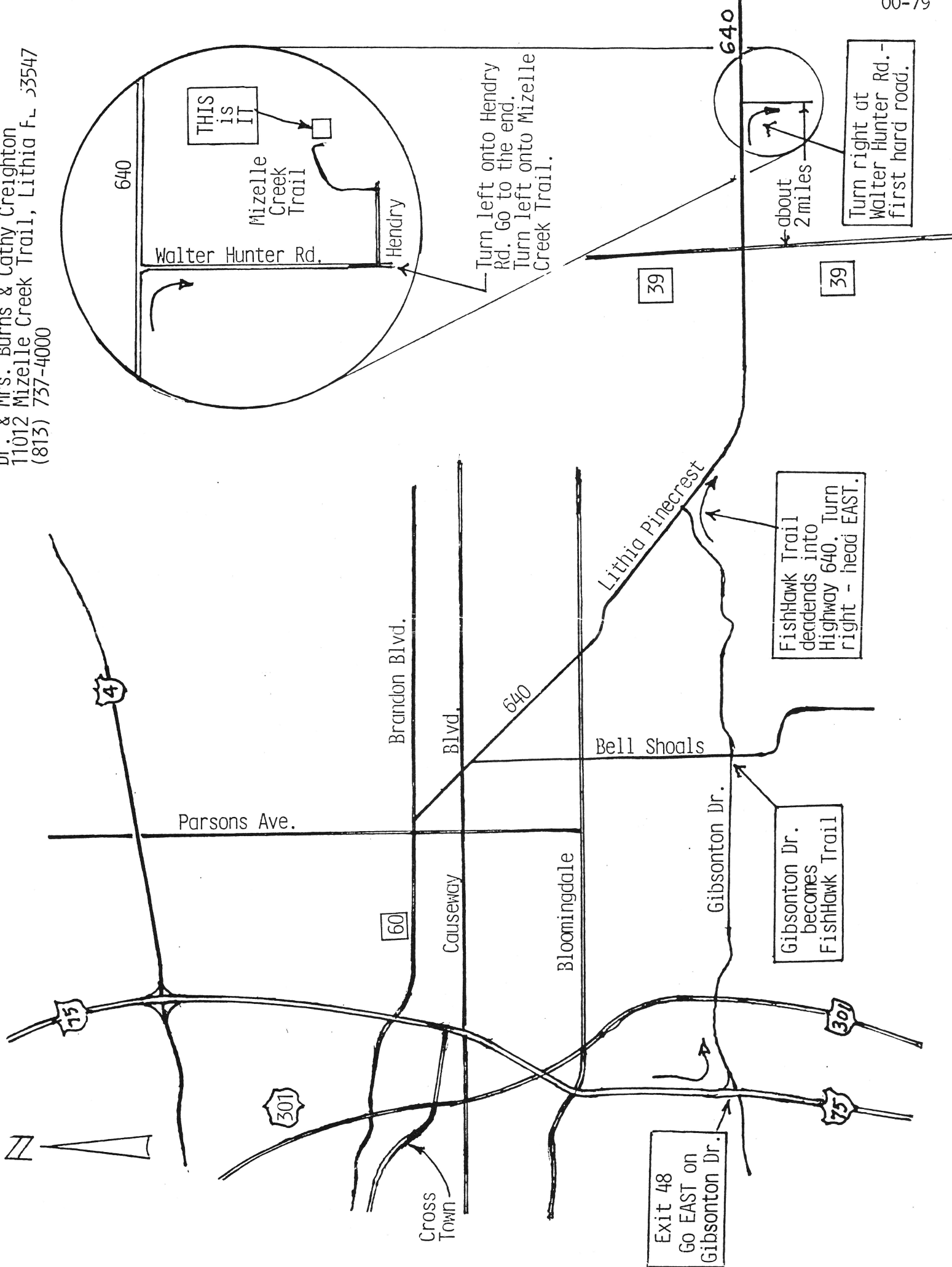
NOVEMBER PLANT RAFFLE

PLANT	DONOR	WINNER
Muscadine Grape	Novak	S. Doan
"	"	T. Scott
"	"	Marv Hyne
Spanish Lime (Genip)	"	S. Owen
Jack Bean - huge green bean (2)	"	?
Jack Fruit relative (2)	"	?
Phosphate Fertilizer	Zmoda	?
Ginko	Sal Russo	?
French Tarragon	"	T. Scott
Surinam Cherry	"	?
Sago Palm (2)	J. Cimafranca	Shane Smith
Catley Guava	"	Lillian Smoleny
Bromeliad	"	?
Atufio Mango	Paul Branesky	Verna Dickey
Papaya	"	James
Yellow Flower Plant	Kent Helmick / Ted Matthews	?
Lemon Sanboken	"	Shane Smith
" (2)	"	?
Lemon	"	?
"	"	?
"	"	?
Ruby Grapefruit	"	?
Soursop	"	J. Cimafranca
Loquat	"	?
Jack Fruit	"	T. Anthony
Banana	Heath	?
Papaya	"	James
Fig	"	?
Pineapple	"	Shane Smith
Eugenia Confusa	"	"
Chaya Spinach	"	?
Passion Fruit	"	Jim Davis
Surinam Cherry	"	?
Flower Pot - seal	Kent Helmick / Ted Matthews	Verna Dickey
Roselle (2)	Lee	?
Avocado	"	?
Hong Kong Orchid	"	J. Cimafranca
"	"	Susan Reed
Aluminum Plants	"	?
Carob	Weekley	?
Papaya (2)	"	?
Citron Fruit	Stark	?
Passion Fruit (2)	"	?

Please POST THE FLYERS.

(make extra copies if necessary)

Dr. & Mrs. Burns & Cathy Creighton
11012 Mizelle Creek Trail, Lithia Fl. 33547
(813) 737-4000



WHAT'S HAPPENING

Nov-Dec 2000

by PAUL ZMODA

My favorite pummelo fruit is 'Siamese Sweet'. I tasted our first one, nicely colored and aged for four weeks after picking. It was juicy and very tasty. From my inverted T-bud graft (onto pummelo rootstock) to the feast, it took slightly less than four years wait. The tree is our nicest pummelo specimen - healthy, vigorous and dark green.

The outdoor temperatures are dropping into the forties at night - time to bring the more tender tropicals to a protected place for the winter.

I've been trying to get as many seeds planted and cuttings started as possible while the days are still warm. I potted up some black mulberry cuttings and some pomegranates. The potted air layers of my star fruit 'Sunrise' are growing so well that I set one out in the yard.

Other new plantings: Native cactus, assorted hibiscus, daturas, star anise and basil.

Tasting Table: November 2000

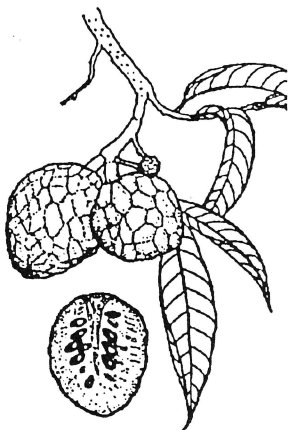
Paul Zmoda: Canned Lychees	Musgraves: Lemon Bars
Paul Branesky: Fruit Stollen, Ice Creams	Thom Scott: Grapes
Tess & Deven Anthony: Key Lime Cake	Pat Jean: Fruit Stollen
Lillian Smoleny: Lemon Coconut Bars	Sharon Pilot: Coconut Macaroons
Rose Terenzi: Chocolate Nut Peppered Biscotti	
Sally & Jim Lee: Apple Pecan Coconut Coffeecake, Mango Pecan Pudding Cake, Stir Fry Noodles, Roselle Juice	
Linda Novak: Key Lime Cookies, Guava-Banana Nut Bread, Lemon-Blueberry Pound Cake, Fresh Fruit Platter, Fruit Juice	

The tasting table is a very popular part of our meetings and your delectable donations are very much appreciated. Each person who donates to the tasting table may receive a ticket for the plant exchange.

A GUIDE TO TROPICAL FRUIT TREES & VINES (continued from last month)

FAMILY - ANNONACEAE

11. *Annona cherimola* - Cherimoya



A small, deciduous tree native to Ecuador and Peru. Height to 25 feet, leaves to 10 inches long. Fragrant flowers are yellow and brownish outside. Conical fruit is light green and up to 5 inches long - maturing in late summer. Pulp is white, aromatic and custard-like texture. It is considered the best of the Annonas. Plants can be started from seeds, but budded plants are most desirable. Seedlings will produce fruit in 3 to 4 years.

*Wishing you and yours all
the joys of the season!*

12. *Annona cherimola* X *A. squamosa* - Atemoya

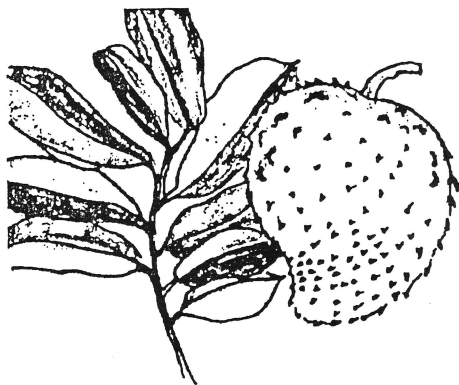


A cross between cherimoya and sugar apple. Plant resembles sugar apple in growth, but fruit is more like the cherimoya. Propagation is by budding or grafting since plants from seed are not true.

13. *Annona montana* - Mountain soursop

Small evergreen tree native to West Indies where it is called wild guanabana. Fruit is size of small custard apple - has yellow flesh and poor taste. Plants started from seed.

14. *Annona muricata* - Soursop, Guanabana



Evergreen tree to 20 feet, leaves to 6 inches long. Flowers are yellow, produced singly. Fruit is egg shaped to 8 inches in length, dark green and covered with long, curved, soft spines. Flesh is white and used to make refreshing drinks and sherbet. It can also be eaten out of hand - but is slightly acid. Plants will not tolerate cold.

15. *Annona purpurea* - Soncoya

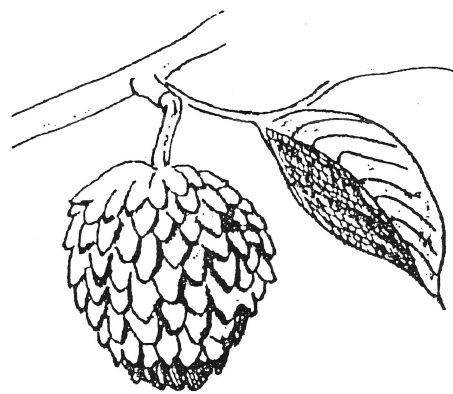
This plant is found in Mexico and Central America. Plants grow well in moist, tropical lowlands. The 6 inch, oval brown fruit is covered with soft spines. the flesh is soft and bright orange in color.

16. *Annona reticulata* - Bullock's heart, Custard apple

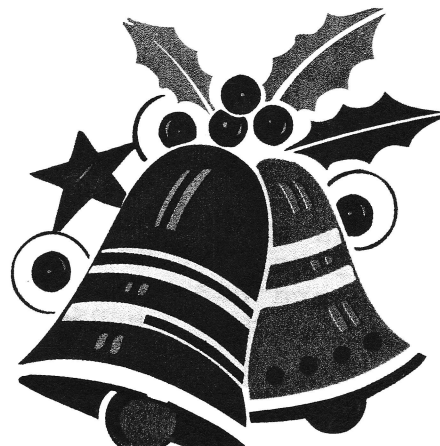


A 25 foot, scraggly, low-branched deciduous tree with leaves to 8 inches in length. One inch yellow flowers are produced in axils of leaves. Heart-shaped fruit is reddish-yellow or brown and up to 5 inches long. Fruit is of poor quality, but of value to produce rootstock for other annonas.

17. *Annona squamosa* - Sugar apple, Sweet sop



A small evergreen tree to 20 feet with open growth habit. Leaves to 5 inches long, and yellow-green flowers are 1 inch across. Heart-shaped or conical green fruit is 3 inches long and covered with soft, roundish projections. Flesh is sweet and refreshing, and is eaten fresh or used in desserts. Plant grows well in lowlands and freezes at 27 degrees F. Plants propagated from seed and grafting.



PLANT NUTRITION & FERTILIZER

by SIDNEY PARK-BROWN

Sidney began by looking at the essential nutrients that plants need. There are 16 that are essential for growth and reproduction. Three of the elements come from the atmosphere: carbon, hydrogen and oxygen, and plants use them in their development. 13 of them come from the soil and are taken up from decaying organic matter or from the nutrients that we supply. Together these are what we call macro and micro nutrients. They are nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, iron, manganese, boron, chlorine, zinc, copper and molybdenum. The six macro nutrients are often referred to as the major elements. They are nitrogen, phosphorus, potassium, sulphur, magnesium and calcium. Plants need more of these six nutrients than the others that are called micro nutrients or minor elements, which is a poor description because they are very essential to the plant, but are needed in much smaller quantities. The minor elements are iron, manganese, boron, chlorine, zinc, copper & molybdenum. We need to remember that if any of these nutrients are missing, we will have a deficiency in our plant. All are of major importance. One important thing to know about nutrients is mobility. If you find the leaves of a plant beginning to yellow you suspect a deficiency and would like to narrow it down to a macro or a micro nutrient. Nutrients differ in their mobility inside the plant. Some nutrients move around easily up & down in the plant. Others are much more difficult for the plant to move about or translocate. Macro nutrients are easily translocated from older tissue to younger tissue, so with a deficiency in nitrogen, potassium or manganese, for instance, the symptoms are found first on older leaves. If the plant is trying to grow and is short of nitrogen, for instance, either in the plant or the soil, the plant will move the nitrogen into the new growth from the old leaves, which indicates that a deficiency in a macro nutrient will show up in the old growth. Conversely, since micro nutrients are difficult for the plant to translocate, the micro nutrient deficiency symptoms will show up first on the younger leaves. This is most common in an iron deficiency or a manganese deficiency.

Next, a little terminology. "Chlorosis" means a yellowing of leaf tissue. "Necrosis" means the death of leaf tissue. "Marginal" refers to the leaf's edges and "intraveinal" refers to the tissue between the leaf veins.

Nitrogen deficiency is the most commonly encountered deficiency in this part of the country. We have really crummy soil, real sandy, with low organic constituents. Any fertilizer we put on is lost in the rain very quickly. Potassium is the same way. Both nitrogen & potassium are very soluble nutrients so rain just moves those nutrients through the soil. The most common deficiencies are nitrogen, potassium and magnesium, which are macro nutrients, and manganese and iron, which are micro nutrients. These 5 nutrients, as deficiencies, are what you are going to run into 99% of the time in your garden in this area. So even though there are 16 nutrients essential to plants, we only need to be concerned usually with 5 of them.

Let's look at them individually, where they show up in the plant and how they look. She reminded us that nitrogen is required in large amounts and is a nutrient that most limits growth, and one that is very easily leached from our soil. Of all the nutrients that she was talking about, only the element nitrogen occurs in a gaseous form in soil and in the atmosphere. It's normally unavailable to plants except in the legumes which are called nitrogen fixing plants, such as the bean family, peanuts, pigeon peas and tamarind, which are plants that form a symbiotic relationship with a bacteria which is able to take the nitrogen from the atmosphere and convert it into a form that plants can use. Legumes are very unique in the plant world because of that ability. A nitrogen deficiency in plants produces chlorosis on the older leaves first and if the plant is really hungry for nitrogen, it can produce yellowing throughout the entire plant and reduce growth.

Now let's look at phosphorus, even though it is not a nutrient deficiency that we are liable to see because phosphorus is an abundant element in Florida soils.

Sidney said she had never seen a phosphate deficiency except perhaps in a soil mix. While it is not normally a problem in Florida soils, it is the second most commonly limiting nutrient for plants worldwide. It is required in moderate amounts in plants and it is important for energy transfer within the plant. The deficiency symptom for a phosphate deficiency, which we probably will never see, is an accumulation of purple pigment in the older leaves first.

Potassium, the third nutrient, is required in large amounts by plants. It is important in plant-water relations and stress tolerance, and is the third most commonly limiting nutrient worldwide, and horticulturists are beginning to realize how important potassium really is; it is also easily leached from the soil. Potassium deficiency symptoms include chlorotic spots on the leaves and the marginal necrosis on the older leaves.

Magnesium is required in large amount by plants & is important in chlorophyll formation within the plant. Magnesium is a compound of dolomitic lime, so if you're adding lime to your soil to sweeten it, you should always use dolomitic lime because it not only has calcium in it but also magnesium. The deficiency symptom of magnesium is chlorosis of interveinal areas, appearing first on the older leaves, and in palms, a chlorotic band along the margin of the older leaves.

Manganese, which is one of the micro nutrients, is very important to plants. It is required in small amounts but is very important in many metabolic processes including phosphate metabolism. In the high pH soils, however, manganese becomes unavailable to the plant. A plant growing in a high pH soil will probably show a manganese deficiency. Manganese deficiency symptom is severe chlorosis of interveinal areas appearing first on recently matured leaves. It is one of those elements that a plant cannot easily move around.

Iron is a micro nutrient required in small amounts but is required in higher amounts than other micro nutrients. It is also required for chlorophyll formation and becomes unavailable at high pH just like manganese. Deficiency symptoms of an iron deficiency are interveinal chlorosis on the youngest leaves and leaves become

uniformly yellow-white as the deficiency progresses.

Nutrient deficiencies are caused by 1) a lack of nutrients in the soil, obviously; 2) by a soil pH that is too alkaline and 3) by drought. Soil must be moist for the nutrients to become available to the plant.

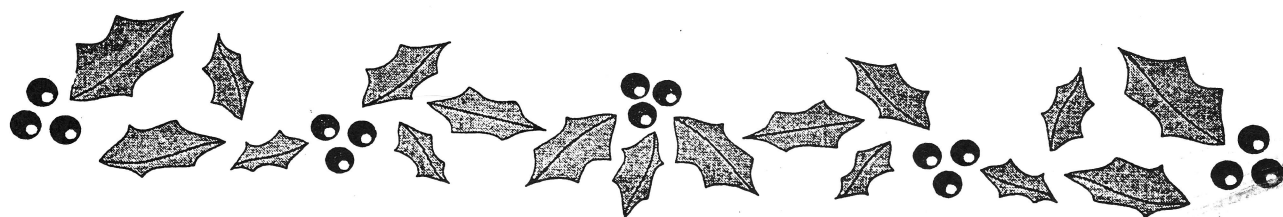
Sidney next moved into fertilizer terminology. The analysis of a fertilizer is nothing more than the three elements shown on the package such as 6-6-6- or 10-10-10. These numbers represent the percent by weight of nitrogen, phosphorus and potassium. A "complete fertilizer" simply means it has nitrogen, phosphorus and potassium. A "balanced fertilizer" means that all 3 elements are present in the same quantity. A "slow release" fertilizer is one where the fertilizer has been encapsulated and is released slowly into the soil with the addition of water. In any bag of fertilizer there may be one of four forms of nitrogen. The bag may contain nitrate nitrogen, ammoniacal nitrogen, water soluble organic nitrogen and water insoluble nitrogen. Water insoluble nitrogen is a true organic. Animal manure, sewage sludge, blood meal, compost are all water insoluble nitrogen sources. Nitrate nitrogen is the most soluble, which means it's the most easily available to the plant, but it also means it's the most quickly leached from the soil. Ammoniacal nitrogen and nitrate nitrogen are very similar in terms of their availability to plants. Ammoniacal nitrogen can be converted to nitrate nitrogen by a bacteria in the soil and becomes almost immediately available to the plant. Nitrogen is only available to plants in one form and that's nitrate nitrogen, so if you provide water soluble, organic nitrogen such as urea, or water soluble nitrogen such as an animal manure, they will have to be converted to nitrate nitrogen for the plant to use them. Nitrogen in manure (insoluble nitrogen) will be converted into urea, then into ammoniacal nitrogen and finally into nitrate nitrogen to permit the plant to use it. If the fertilizer bag says 100% organic, that only refers to the nitrogen in the bag and refers to the water soluble nitrogen and the water insoluble nitrogen in the bag. Urea is a manufactured organic or synthetic organic compound. Natural organic refers to

manure, blood meal, bone meal, etc. Slower controlled release fertilizers have water insoluble nitrogen or coated forms of urea to provide nitrogen that is available over a long period of time. Now fertilizers are also providing coated potassium for long time release of potassium. You will find this in Osmocote, Nutricote and other slow release fertilizers. In 100% slow release fertilizers all of the nutrients are slow release. When shopping for fertilizers it is important that the nitrogen & potassium, the first & third numbers, are balanced. The fertilizer should have as much potassium as nitrogen, but the second number, the phosphorus, can be low or missing entirely because Florida sands are rich in phosphate already, so an 8-0-8 or a

10-2-10 are the most desirable nutrient levels for fertilizers in Florida. It is wise to use slow release fertilizers as much as possible.

In comparing the price of different fertilizers, we add up the analysis, remembering that each number is the percentage of the total in weight. An 8-4-8 fertilizer, for instance, has 20% nutrients. We multiply this by the weight of the bag and divide the answer into the price to determine the price per pound of nutrients.

Sidney finished by indicating that if we need more information, we can call the Cooperative Extension Service at 813-744-5519, extension 150.



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