



McLennan County Master Gardener Association
Volume XI Issue 10 • October 2009

PRESIDENT'S LETTER - Steven Lovecky

Justus von Liebig (12 May 1803 – 18 April 1873) was a German chemist who made major contributions to agriculture and biological chemistry. He is known as the “father of the fertilizer industry” for his discovery of nitrogen as an essential plant nutrient, and his formulation of the **Law of the Minimum**. The Law of the Minimum, as first described, states that the growth of any plant is proportional to the amount of the most limiting essential nutrient. The nutrients our plants receive are part of the environment of which we have control. All environmental factors influencing plant growth exist in three conditions: (1) optimum, (2) deficient, or (3) excessive. A deficient or excessive factor limits plant growth. Liebig’s Law implies that a plant will only grow as well as the most limiting factor will allow. Environmental factors affecting plant growth include: light, water, temperature, essential nutrient availability, soil pH, carbon dioxide availability, oxygen availability, etc. If one of these is less than optimum, it will limit growth. For example, if the soil is poorly drained, and the oxygen level in the soil is deficient and most limiting, you can only improve plant growth by fixing the problem. Changing other factors, such as giving the plant more light, or applying more fertilizer, will have no positive effect. Only when the oxygen level in the soil is increased will plant growth improve, and, it will only improve as far as the next limiting factor will allow.

The key to using Liebig’s Law of the Minimum in making plants grow better lies in the ability to identify the limiting factor. Is the

amount of light the limiting factor? Is the amount and frequency of water the limiting factor? Is a deficiency of an essential nutrient the limiting factor? Knowing your plants needs is essential to identifying the limiting factor. There is often the belief that increasing one particular factor will improve some aspect of plant growth or performance. Liebig’s Law tells us this is not the case. The recommendation to improve flowering is often to increase the amount of phosphorus in the soil. Adding more phosphorus only provides a benefit if the phosphorus in the soil is deficient, and even then it will not necessarily improve flowering unless it was the most limiting factor. Lack of flowers or fruit is more likely caused by insufficient light. Discovering the elements available in the soil via soil tests helps identify deficiencies or extremes.

Although it takes education and experience to understand all the environmental factors important in plant growth, knowing a little about Liebig’s Law of the Minimum allows you to understand the overall picture and lays the foundation for growing better plants. Portions of the preceding information were taken from the Eastern Spine, the Newsletter of the National Capital Cactus and Succulent Society.

What ever else you do, get to know your plants and now is a great time to take soil samples. Identifying elements which may be limiting factors now gives you opportunity to make adjustments early. Another soil test in the spring will give evidence as to the success of that corrective procedure.

McLennan County Master Gardener Association Officers 2009

President- Steven Lovecky Vice President- Jan Serface Secretary- Nelda Cooper
Treasurer- Louie McDaniel Sponsor- Shane McLellan Newsletter- James Storrs
Send volunteer hours to Julia Khoury at 8512 Bosque, Waco 76712, or tkhoury@hotmail.com
www.mclennanmastergardeners.org

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Steven's column covers a topic that I didn't know had a name- Law of the Minimum- but we all come up against this concept often when discussing plant problems. Someone will say, "My zinnias aren't blooming well, and they have this white stuff all over them." You ask if they get full sun, which they must have. "No, but I just fertilized them, and I water them every other day rain or shine. They're on the east side of the house under an eave, but they do get a little morning sun." The person is sure that if he does enough of the "right" things, that will counterbalance one of the essential requirements of that particular plant that isn't being met. What you say in reply is up to you.

Have you ever wondered? ph, PH, Ph, pH? (cribbed from the Internet)

This is a rough measure the acidity of a solution. The "p" stands for "potenz" (this means the potential to be) and the "H" stands for Hydrogen. So you must write pH with a lower case (little) p and an upper case (capital) H. Writing PH would mean a public house! Writing Ph would mean philosophy as in PhD which means a Doctor of Philosophy.

The pH of distilled water is 7, this is neutral. Any solution with a pH below 7 (i.e. pH 1.0 to pH 6.9) is an acid and any solution with a pH above 7 (i.e. pH 7.1 to pH 14) is an alkali.

Acidic solutions have a pH between 1 and 6.9 === your stomach contains HCl it is pH2. Alkaline solutions have a pH between 7.1 and 14. === your small intestine is pH 9. Neutral solutions are neither acidic nor alkaline so their pH is 7. -JMS

PROGRAM PREVIEW

Wednesday, October 14, 2009, 12 noon at the Arboretum



After the business meeting, at which the slate of officers for 2010 nominated by the committee headed by Jene Hering will be announced (election in November), Tim Castig of Tim's Greenhouse will speak on the culture of fall and winter plants such as poinsettias, fall mums, snapdragons and pansies. He promises to reveal some secrets about success with pansies that even the veterans won't know. Don't miss this one!

SCHOOLHOUSE (OXBLOOD) LILIES

Ila Jean Carothers had a bumper crop of schoolhouse lily bulbs this year. Botanically they are known as *Rhodophiala bifida* or *Hippeastrum advenum* (I think the former is correct) and they originally hail from Argentina. If you want a little more information, here's an article by a grower in Austin. (Ctrl + Click to follow link)

<http://www.zanthan.com/gardens/plants/rhodophiala.html>



VOLUNTEER OPPORTUNITIES

October 12 through Oct. 16.....[HOT Fair Milking Exhibit](#)

8:30-11 am and 11:20 am-1:20 pm ([help still needed](#))

Call Sara Chudalla (Ext. Office) 757-5180

October 18, 3-5 pm. [Children's Garden Fair](#)

Jeanette Kelly, 776-2178, jkelly46@aol.com

October 29, 8:30 am...[Cedar Ridge](#) "prep garden morning" Sandy Back, 857-9736,

sback@grandecom.net

*October 30, 8:15 am.. [Cedar Ridge](#) garden day with the children (as above)

*October 30, 8:30 am...**Woodway Elementary** children's day in the garden
Kim Dougherty, kiminind@yahoo.com

Opportunity dates yet to be set for October

McGregor Demonstration Garden. Workday and Dedication Date of the garden.

TSTC Rose Garden...date to take cuttings

*We usually try not to have two opportunities on the same day, however, this will occasionally happen and cannot be avoided.

-Jeanette Kelly

ATTENDANCE AT SEPTEMBER MEETING

Jane Anderson, Mark Barnett, James Bays, Bonnie Belanger, Dick Belanger, Linda Buckner, Sandy Burlison, Ila Jean Carothers, Nelda Cooper, Irene Dauphin, Kim Dougherty, Victor DuPart, Eva FitzGerald, Melody Fitzgerald, Kris Ford, Brenda Golubski, Jeanette Kelly, Steven Lovecky, Louie McDaniel, Barbara Mersinger, Elizabeth Milam, Gerry Milnor, Andrea Moore, Georgia Peterson, Anne Plasek, Sherry Prather, Art Reinking, Carol Reinking, Sharon Richardson, Dawn Segrest, Jan Serface, Della Setser, James Storrs, Barbara Vance, Sonia Warriner, Carol Wood.

SEPTEMBER MEETING MINUTES

The McLennan County Master Gardeners met September 9, 2009 at 6 pm at the arboretum. President Steven Lovecky called the meeting to order.

The August minutes were approved as written in the newsletter.

Treasurer's Report: Louie McDaniel reported an ending balance of \$11,824.71 as of August 31, 2009.

Business: Sandy Burlison was welcomed as the newest master gardener member. Congratulations to Sandy for completing her volunteer hours.

Projects and Committees: Jeanette Kelly reported that a planting and mulching day will be Oct. 3 at 8:30 am in the Trailside Gardens. A docent tour of the Trailside Garden will be given on Sept. 16 at 6 pm for the CBA board. A workday is scheduled for Sept 22 at 8:30 am at Cedar Ridge Elementary. The first day in the garden will be Sept. 24 from 8:30-2:45. An organizational meeting for JMG will be held at Cedar Ridge on Friday, Sept., 11 at 3:45 pm. A date will be set soon in October for MCMG's to take cuttings of roses at the Earthkind Rose demonstration bed at TSTC. Habitat for Humanity will have a dedication for two houses on Sept. 22 at 5:30 pm. Master Gardener members should contact Sarah at the AgriLife Extension Office to help with the H.O.T. milking demo at the fair on Oct. 12-16. Contact Sarah at the extension office if you would like to help with Kids, Kows & More on Sept. 30 from 9-11 and 12:30-2:30 at the fair. A

planting day will be Sept. 25 at Woodway Elementary. Contact Kim Dougherty to help.

The MG's Children's Garden Fair is scheduled for Sunday, October 18 from 3-5 at the arboretum.

The program "Preserving Nature's Beauty" was presented by member Eva FitzGerald. Eva gave a very interesting talk on drying flowers.

The next meeting will be October 14 at noon at the arboretum. Tim Castig of Tim's Greenhouse will present the program. The meeting was adjourned.



Sandy Burleson and Steven Lovecky

NOW IS A GREAT TIME TO PLANT SPRING BULBS

Fall is a busy time for the gardener. Many people think that spring is the most important gardening season, but fall is just as good for planting if not better. The weather is cooling off, pests are decreasing and the conditions are good for establishing plants. It's pleasant to work outside in the cooler autumn environment.

Fall gardens can be put in now — plant cool-season vegetables like lettuce, broccoli and cabbage. It's a great time of year to get shade trees planted as well as spring blooming wildflowers and bulbs.

Spring bulbs are some of the easiest plants to grow and at the same time they are relatively inexpensive and will put on a spectacular show of color when it starts to warm up next year. Nothing announces the coming of spring quite like bulbs popping up, almost forgotten because they were planted so far in advance. When growing spring bulbs, it's important to remember to consider them an annual. For most types, our temperatures don't get cold enough to set new flower buds year after year; it's best to pull up the old plants when they finish blooming and plant new bulbs the following year. One exception is the daffodil, which can become naturalized and return each year.

Nurseries begin stocking bulbs as early as September, but they shouldn't be planted until late October or November. That doesn't mean you can't buy them early — it's best to purchase bulbs as soon as they start appearing in garden centers and nurseries because the selection is good. Buying bulbs early ensures that healthy ones can be found — not shriveled up or moldy.

Store bulbs in a cool, dry spot until time for planting, preferably in a refrigerator. Just don't place bulbs in the same refrigerator as fruits or vegetables, because that would damage the blooms. When the soil cools off in late October or November, the bulbs can go in the ground.

Flowers like crocus, daffodil and ranunculus are good examples of bulbs to try in this area. Tulips and hyacinth are also beautiful flowers but need to wait even longer to be planted — December is a better time for them. Tulips and hyacinth benefit from a 60-day pre-chilling treatment in the refrigerator before planting.

When planting bulbs, be sure to amend the soil in the beds with lots of organic matter such as finished compost. They can also be planted in containers with a nice well-drained potting soil. They should go in about 6 inches deep, or twice the height of the bulb. They can be planted in full sun to part shade; just don't put them in deep full shade.

It's definitely not an instant impact in the landscape, but planting spring flowering bulbs in the fall will be well worth the effort and wait when spring comes.

- by **Allison Watkins**, Tom Green County Extension Horticulturist.

(Thanks to Ila Jean Carothers for finding and submitting this article.)

FALL IS A BUSY TIME OF YEAR FOR GARDENERS!

Fall is the ideal time to plant shrubs and trees. They will then have all winter to begin developing a good root system to give them a head start in the spring. Be sure to water them during dry spells even when the weather is cold.

The fall lawn fertilization is the most important of the year. If your soil is highly alkaline, be sure to use an all-nitrogen fertilizer with at least 50% of it in slow-release form.

Sow Swiss Chard now. This beet cousin is a potentially perennial vegetable.

Sow Poppies now in sunny, well-drained sites to enjoy their beautiful spring blooms.

Houseplants which spent the summer outdoors should be acclimated gradually to lower light intensities.

Plant Garlic cloves in very well-drained sites in full sun.

Plant perennial cultivars of Daffodils, but never 'King Alfred,' immediately.

Have floating row cover, old blankets, tarps, etc. available to protect vegetable garden in case an early freeze occurs. Polyethylene plastic, by itself, is useless, with no insulative properties.

It's about time to move tropical plants back into the house or greenhouse. Apply insecticidal drenches to remove pests a few days before pots are brought inside.

Start Freesia and Paperwhite Narcissus in pots. Keep them cool but protected from freezing.

Don't forget to read Judy Tye's articles in each issue of *Waco Today*. The web links are ridiculously long, but if you go to the Waco Trib homepage and then to *Waco Today* and look under **Garden** you will find them. They are well worth the effort.



Rainwater Harvesting Class & Make your own Rain Barrel

Saturday, OCTOBER 31st, 1PM

**Brought to you by:
The Rain Barrel Connection & Keith's Ace Hardware**

**Location: Keith's ACE Hardware-Hewitt
1424 Hewitt Drive**

Cost: Registration fee: \$50.00 (includes a 55 gallon rain barrel to take home)*Optional Rain Barrel Color Wrap™ available at an additional cost of \$21.95

******Please fill out a [registration form](#)******

**questions, comments... ask for Melissa Crist
or email mcrist@keithhardware.com**

Rainwater Harvesting Class and How to Make a Rain Barrel
The Rain Barrel Connection
Date: OCTOBER 24TH
Sponsored by ACE Hardware

Please Print

Name _____

Address _____

City _____

Daytime Phone _____

E-Mail _____

Registration fee: \$50.00 (includes a 55 gallon rain barrel to take home)

*Optional Rain Barrel Color Wrap™ available at an additional cost of \$21.95

Type of Payment:

_____ Check _____ Money Order _____ Cash

Make checks payable to: **The Rain Barrel Connection.** Please include your Drivers License number on your check.

Also, The Original Rain Barrel Color Wrap™ is available to all participants. The color wrap is a cover that comes in multiple colors and will blend the rain barrel to match the brick or siding color of your home. Each color wrap is offered at a reduced price of \$21.95 and will be installed during the construction of your rain barrel. If interested please check the box next to the color of your choice.

Brick Red _____ Chocolate Brown _____ Saddle Tan _____

The total class price including the Color Wrap: \$50.00 + \$21.95 = \$71.95 tax free.
That is a \$71.00 savings off the retail price!!!

Mail your payment and registration form to:

The Rain Barrel Connection
Rex Arnold
10621 Lineberry Lane
Frisco, TX 750358

WORKSHOP IS LIMITED TO 30 PARTICIPANTS. REGISTER AS SOON AS POSSIBLE!!

Note: All registration forms and payments must arrive by OCTOBER 14TH

These photos were taken at the September meeting when Eva FitzGerald presented her program on pressing and mounting flowers.



I've posted some photos of my coleus, sweet potato vines, and foxtail fern (*Asparagus densiflorus "Meyersii"*). They may be viewed at the site below if you have some time to kill. Some of them are repetitious.

<http://www.shutterfly.com/lightbox/view.sfly?fid=048109381eb688eac9f3edf1ebadc1fb>