Dear Friends,

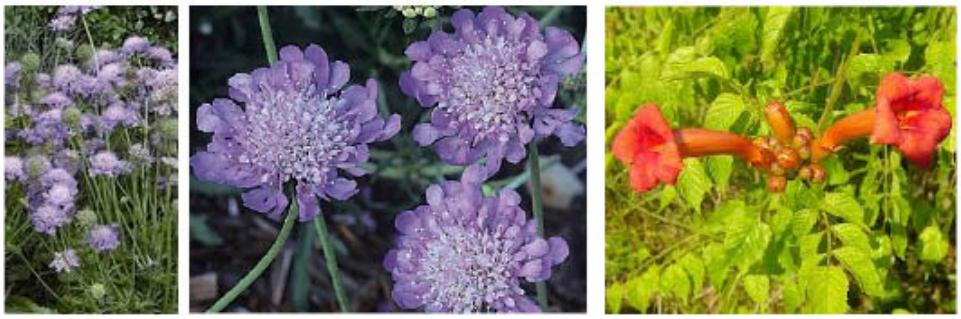
This is the seventh issue of our weekly gardening newsletter for Houston, the Gulf Coast and beyond. This a project of The Lazy Gardener, Brenda Beust Smith, John Ferguson and Mark Bowen (both John and Mark are with Nature's Way Resources). We also have a great cast of contributing writers who will chime in regularly. We would love to keep receiving your input on this newsletter . . . . comments . . . . suggestions . . . . questions. . . .Email your thoughts to: lazygardenerandfriends@gmail.com. Thanks so much for your interest.

Please .

Enjoy!

"BEWARE" PLANTS AND A SCARY FIRESPIKE THREAT

BY BRENDA BEUST SMITH



Scabiosa, left and center, is a great spring/early summer bloomer for us. But don't expect it to stand up to our summer-long heat and drought. Right, our native trumpet creeper is invasive.

It's hard to resist tempting promotions for gorgeous flowers, especially when they're advertised as incredibly heat and drought tolerant - perfect choices for "Southern" gardens. However, If you live in

the Greater Houston area, it's important to realize that we are not "The South." We are farther "south" than "THE South."

We are, in fact, a subtropical pocket that is alternately wetter, drier and hotter than, say, Atlanta, or even Dallas.

We don't have the winters "The South" still has (even though their winters too are getting shorter and warmer with climate change).

What this means is that although we can all grow many of the same plants, we may have to adjust the bloom seasons a little.

This hit home twice recently. A friend asked about a "new" type of "Butterfly Scabiosa" advertised on a shopping channel as so heat and drought tolerant, it will bloom all summer long for "Southern" gardens. Best of all, it's touted an incredible butterfly attractor.

I was skeptical. Scabiosa, or pincushion flower, is - I'd always heard - one of those wonderful spring/early summer bloomers for us. And yes, it does attract a lot of butterflies.

But in the Gulf Coast summer, they tend to fade away along with alyssum, blanket flowers, bluebonnets, calendulas, daisies (like Shastas and English), larkspur, marigolds, nasturtiums, pansies, petunias, phlox, poppies, snapdragons, sweet peas, verbena and wallflowers, to name just a few that can't take our blasting heat.

These are wonderful plants to fill our gardens with color through to May and maybe even into June when later-blooming "summer toughs" can take over.
Oh, no, my friend insisted. They said on TV this is a brand new scabiosa that can really take the heat and drought. And it blooms all the way into fall.

I knew Joshua's Native Plants carries scabiosa, and Joshua Kornegay's always up to date on new varieties. I emailed him and his reply:

"The new "Butterfly " is NOT an improvement on RUGGEDNESS in the South. Scabiosa STILL falters in Houston come July. - Joshua

Then I looked up the shopping channel's website. Yes, it did say these bloom early summer to late autumn. But under "Heat Tolerant," the website says: No. That's not what they said on TV apparently.

That same day, I was confronted with an emailed internet ad for trumpet creeper vine.

Only it was called Hummingbird Vine. It looked suspiciously like our native trumpet creeper vine (Campsis radicans.)

This may be a great hummingbird attractor in "The South." I don't know. What I do know is that here it is like kudzu. You can see it all over this area, decorating trees with its pretty orange trumpet flowers.

I swear, if we left our property for five years, when we came back it would be solid trumpet creeper vines. They come up everywhere. They climb every tree.

Yes, they're pretty when they bloom (which isn't all that often). But they are DEFINITELY INVASIVE here in Aldine. That's not to say, however, they can't be useful. Here's a trumpet creeper "tree" trained by an enterprising gardener on Aldine-Westfield some years ago:

Trumpet Creeper Tree

The problem is, by giving this plant so much space to grow, you are encouraging an incredible root system below ground that is going to start sending up innocuous vines into any surrounding trees.

You probably won't even realize it's there until orange flowers appear overhead and the vines leaves start cutting off sunlight from that tree's leaves

To make life even more difficult, however, there are varieties of trumpet creeper vine that are NOT invasive here.

As a rule, the invasive native has relatively few flowers, especially in clusters.

The improved varieties will have a larger cluster of flowers, and the blooms themselves tend to be larger and richer in color.

The best way not to get tricked: buy them only from a nurseryman you trust.

Good example: "Mme. Galen" ('Campsis x tagliabuana 'Madame Galen'), which has beautiful orange flowers that are larger and more prolific than C. radicans, with wonderfully controlled growth.

So, to make sure I wasn't maligning a perfectly innocent plant, I wrote the company advertising this trumpet creeper. I asked for the botanical name.

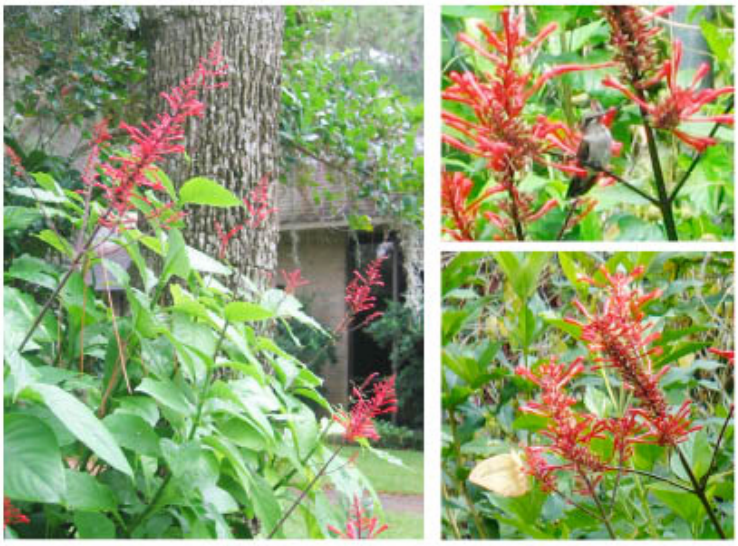
This was their answer:

* Are hummingbird vines perennials: Yes
* How big are hummingbird vines when shipped: 6 inches

Hum. Makes one suspicious.

I'm not saying don't ever order plants that are nationally. I'm saying:

* remember where you live and, before you send them money,
* check with a local HOUSTON area source about the validity of claims for this area.



Firespike

THREAT TO FIRESPIKES?

My firespikes, above, are among my most favorite plants.

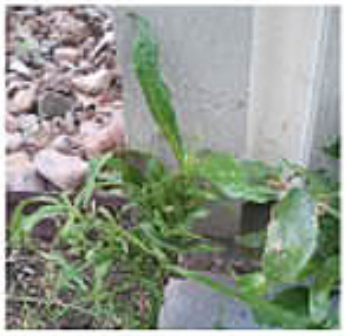
Not only do they bloom for me in both sun and shade, they attract butterflies and are my very best hummingbird attractors.

But what I appreciate the most is that Odontonema strictum (as they are officially known) don't just up and die when they're too thirsty - as too many plants do.

Firespike's wilted leaves are like a scream that reaches even a lazy gardener's ears: WATER ME NOW!

So it was a with a sense of total panic that I realized the distorted, twisted plant Joanne Matava was showing me after my talk to the Lakewood Forest Garden Club really were firespike.

What could the problem be?



My first diagnosis was chemical damage, as from improperly applied fertilizers.

Joanne said they had not been fertilized. After searching the internet, she suspected it "could" be Cucumber Mosaic Virus or (CMV), a problem for which there is no cure.

I queried several local experts and most said it's possible. They'd have to see the actual leaves.

However, as Robert (Skip) Richter and Dr. William Johnson, Harris and Galveston County Horticulture Agents, respectively, commented, it equally could be herbicide damage.

Dr. Johnson noted: "New leaves of CMV infected plants are slightly mottled a yellowish green color, they remain small and typically developed a wrinkled and distorted shape.

Skip added: "Herbicide damage can occur from using mulch and compost or manure that is from treated plants, so people often will say they "didn't spray anything on or around the plants" but yet contaminated mulch, manure, or compost can be the cause."

My recommendation now, Joanna, is to take leaves (sealed in zipped plastic bags in case your diagnosis is correct!) to your nearest County Extension Office.

The Master Gardeners will help you make a specific diagnosis.

Find your County office at: http://mastergardener.tamu.edu/county-programs/

Use them! They're an incredible resource, they maintain a bank of phones to answer your questions and they're not out to sell you anything.

While you're on the phone, ask if they have demonstration gardens.

Almost all our surrounding county extension offices do. In these you will find labeled plant that do well in your area as well as the Master Gardeners themselves, always ready to offer advice.

These gardens are also the sites for incredible plant sales. Get on their mailing lists!

"THE LAZY GARDENER'S GUIDE ON CD" - Specifically for Houston Area gardens - WHAT TO DO EACH MONTH - when to fertilize, prune, plantwhat where, best plants for sun, shade, butterflies, hummingbirds,etc. Based on Brenda's quirky 40+ year Houston Chronicle Lazy Gardener column. PDF format, print out only the month you need. $20 total, checks payable to Brenda B. Smith. Mail to: Lazy Gardener's Guide on CD, 14011Greenranch Dr., Houston, TX 77039-2103.

WEEKLY EVENTS & ANNOUNCEMENTS CALENDAR

April 27-28: BROMELIAD SHOW AND SALE The Bromeliad Society/Houston, Inc. will hold their annual plant show "Bromeliads: Spectacular Beauties" and sale on April 26, 27, and 28 at Mercer Arboretum and Botanic Gardens (22306 Aldine-Westfield Road). Bromeliad growers will be on hand during sale hours to answer questions. SHOW HOURS: Saturday, April 27, 2-4 p.m. Sunday, April 28, 11 am - 3 p.m. SALE HOURS Friday, April 26, Noon - 4 p.m. Saturday, April 27, 9 a.m. - 4 p.m. Sunday, April 28, 11 a.m. - 3 p.m. Free Admission Website: www.bromeliadsocietyhouston.org. Charlien Rose
(713)-686-9969

April 27 & 28: Saturday-Sunday, April 27 12-4 pm., April 28 1-5 pm. Heritage Gardeners of Friendswood 21st Garden Tour, "Through the Garden Gate", 112 W. Spreading Oaks, Friendswood, TX. $10, children 10 and under free. (281) 992-4438, www.heritagegardener.org

April 27: Identifying the Perfect Plant for your Space Garden Clinic, 10:15 a.m. at both Cornelius Nursery locations, 1200 N. Dairy Ashford and 2233 S. Voss; http://www.callowaysÂ.com/garden-eventsÂ Free.

April 27: 8:30 am - 4:30 pm, Montgomery County Master Gardeners in conjunction with Texas AgriLife Extension Service will be hosting the Aquaponics System Design
and Operation Workshop. The workshop features both classroom time and "hands on" construction of a single family Aquaponics system. Your registration fee includes lunch and also enters you into a drawing to win the aquaponics home system. Classroom topics will include: history of Aquaponics, various system designs and terminology, planting and harvest techniques, fish health and water quality, pump selection and flow rates. Location: Tom LeRoy Education Center
9020 Airport Road, Conroe, TX 77303, 936-539-7824, www.mcmga.com
Registration (by April 19, 2013).

April 27: 9 am - 3 pm, 31st annual Herb Day - "A Bloomin' Seminar" presented by The South Texas Unit of The Herb Society of America. Registration deadline is April 19th. Event is held Saturday, April 27th at the Houston Civic Garden Center, 1500 Hermann Park Drive. Speakers: Lynn Herbert, "A Garden Book for Houston and the Gulf Coast"; Marian Buchanan, "Edible Flowers"; Jay White, "Herbal Bouquets". Includes box lunch, booklet, gift bag, door prizes, refreshments. Must register in

advance for $45, see website for details: herbsociety-stu.orgÂ

April 28: 1 4 pm., Hibiscus Show & Plant Sale, Knights of Columbus Hall, 702 Burney Rd. SugarLand, TX

May 4: All-Day Native Plant Day Event at both Cornelius Nursery locations;
Gardening with Texas Native Plants Clinic, 10:15 a.m. at both Cornelius Nursery locations, 1200 N. Dairy Ashford and 2233 S. Voss; http://www.calloways.com/garden-events Free.

May 4-5: 2013 Water Garden and Pond Tour sponsored by the Houston Pond Society and Lone Star Koi Club. 10 a.m.-5 p.m. both days, members open around 20 private water gardens and ponds of all sizes, with owners on hand to answer questions. $10 for both days; tickets available at any participating garden. Details
at sites www.houstonpondsociety.org or www.lonestarkoi.com. Advance tickets available at Nelson Water Gardens, Katy.

May 11: Brazosport Daylily Society will host their annual flower show & plant sale. It will be held at St. Mark's Lutheran Church, 501 Willow Drive, Lake Jackson. The sale & show begin at 1:00pm. Admission: Free

May 11: & 12: Nursery Open12-5 pm, Peckerwood Garden Foundation Open Days,
Guided garden tours at 1:00 & 3:00 pm $10.00 per person.
www.peckerwoodgarden.org , 979-826-3232, 20571 FM 359, Hempstead, TX 77445

May 11: 1 - 4 pm., Hibiscus Show & Plant Sale, Nessler Center, Wings of Heritage Room, 2010 5th Ave. North, Texas City, TX

May 14: 6:30 pm, Green Thumb Lecture, Precinct 2 Harris County Master Gardener Will Isbell will present a program on "Insects in your Garden", Location: The Meeting Room at Clear Lake Park (on the lakeside), 5001 NASA Parkway, Seabrook, TX 77586. More info: jansidk@aol.com.

May 15: 10 am, Master Gardener Lecture Series, Diana Foss with Texas Parks and Wildlife speaking on Coyotes and Bobcats in our area, FREE AND OPEN TO THE PUBLIC, Location: The Meeting Room at Clear Lake Park (on the lakeside), 5001 NASA Parkway, Seabrook, TX 77586. More info: jansidk@aol.com.

May 20: 8:30-11:00 am, Open Garden Day. You are invited to tour the working and demonstration gardens maintained by the Harris County Master Gardeners at Precinct 2. Master Gardeners will be on hand to answer your gardening questions. A program on Dividing Bromeliads will be offered from 9:30 - 10:30 am. FREE AND OPEN TO THE PUBLIC, CHILDREN WELCOME! Location: Genoa Friendship Garden, 1202 Genoa Red Bluff, Houston, TX 77034. More info: jansidk@aol.com.

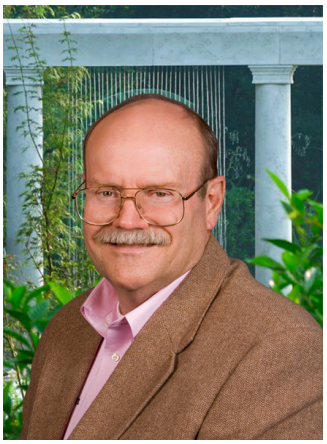
June 9: American Hibiscus Society/Lone Star Chapter Show and Sale, 1-4 p.m., Bellaire Community Center 7008 S. Rice, Bellaire, TX

Recipe for Success has summer internships available. For more information,
visit http://recipe4success.org/get-involved/internships.html

Submit calendar items to lazygardenerandfriends@gmail.com. Events must be submitted by the sponsoring organization. Please note: "garden calendar request" in the subject line.

Need speakers for your group? Brenda's "Lazy Gardener's Speakers List" of area horticultural/environmental experts is available free for the asking. Email your request to: lazygardener@sbcglobal.net.

MULCH PITFALLS, PART THREE



BY JOHN FERGUSON

Mulch made from fresh ground trees can also cause problems in some cases. In fresh wood there is an abundance of soluble carbon compounds that can accumulate in the soil as the fresh wood chips break down. Many beneficial microorganisms only antagonize or kill soil pathogens when they are stressed (i.e. must work for their food). These types of carbon compounds are like candy to the microbes. The microbes are busy eating hence do not have time to bother with pathogens. While the good microbes are busy the pathogens can build up in the soil and are allowed to gain a foothold. Fresh mulches can also become slimy, hold too much moisture, and block airflow creating conditions for disease organisms to grow. Several universities have found these type effects are worse on soil low in organic matter, new landscapes, and compacted soil. This is another reason why composted mulches are more effective and are a better value than fresh mulches. The exception is on heavy clay soils where the soil can lay fallow and undisturbed for many months to a year. In this case the microbes that break down the cellulose and lignin in the wood will also break down the clay into good loamy soil. Lavelle University in Quebec, funded by Canada's Department of Forestry has been doing research for decades on every continent on soil improvement with fresh ground native mulches. They found they improve soil quality better and at lower cost than any other technique, it just requires time for the microbes to work.

We sometimes see mulches advertised with phrases like, decay resistant, does not attract insects, will not grow mushrooms, etc. Translated this means those mulches have been treated with toxic synthetic chemicals (herbicides, pesticides, fungicides, etc.) to produce these effects. These type of mulches defeat many of the benefits that mulches provide, and the chemicals they contain pollute the environment and endanger human health.

Also, research from the USDA has found that if hairy vetch was killed with glyphosate (active ingredient in Round-Up TM) and then cut and used as a mulch, yields in some plants were reduced by 50% (HortScience, December 1997). Research at Michigan State University (published in same issue of HortScience) has found significant growth reduction on ornamental plants using pesticide treated grass clippings as a mulch with post emergent herbicides causing the most damage. It has been learned that most herbicides do not breakdown as previously believed, hence, we should not use mulch from plants or grass treated with herbicides (or pesticides and fungicides). Research at North Carolina State University has shown that herbicide treated grass, when used as mulch, substantially reduces plant growth (80% for cucumbers, 65% for marigolds, 34% for salvias, etc.). Michigan State University has also published research on using pesticide treated grass clippings as a mulch and found significant growth reduction in all species planted (HortScience, Vol. 32(7):1216-1219, December 1997). Purdue University has expanded these studies and found that even growth regulators will persist for months and cause harm when these plants or leaves are used as mulch (Journal of Environmental Horticulture, vol. 15, no.4, December 1997).

Some media articles have talked about the danger of organic materials in agriculture and horticulture. While not a pitfall of mulches or compost, it is related to poor management practices in raising chickens and other livestock. Certain new types of diseases may be present in some types of organic matter and particularly in manures. A new strain of Escherichia coli, a bacterium that is normally benign or beneficial has been discovered that is extremely toxic. It has already caused severe illness and death across the country. It is known as E. coli 0157:H7. As in all E. coli strains, it is easily destroyed by heat. This is another advantage of using any heat composted mulches (i.e. Composted Native), as E. coli is destroyed in a hot compost pile.

During the decay process various types of fungus may grow on the mulch surface. The artillery fungus (Sphaerobolus stellatus) is also known as the shotgun fungus since it can blast its spores 10-15' into the air. These spores are brown to black and very sticky, hence they can discolor light colored surfaces by sticking to them (Bird's nest fungus will also shoot its spores but not as far). If discoloration does occur, a soap and water solution will help to loosen the fungal spores so they can be scrubbed off. Most visible signs of fungus will naturally disappear as the mulch continues to decay into humus. The appearance of slime molds is distasteful to some people, however, the visible signs of this fungus is easily removed by periodically raking the mulch. These types of problems are much more common on mulch made from fresh or woody material rather than composted. They also are more common in thicker mulch layers (4-6" deep).

When using mulches we need to remember the area of the country we are in (i.e. weather and climate) and the type of soils and plants that are growing. Along the Gulf Coast a 3" thick mulch may be desired for most species, while in Arizona or New Mexico a organic mulch 3" thick may prevent the scant rainfall from reaching the soil or trap moisture around plants used to very dry soils (i.e. cactus) and increasing the possibility of disease. In drier areas perhaps only a 1-2" mulch would work better depending on the plant species and watering requirements. Another possible problem in very dry areas is the possibility of fire from a dropped cigarette or sparks from a fireplace or bar-b-que pit. Mulches like bark, shredded wood products, straw, pine needles, ground rubber and some plastics are easily ignited.

Another factor to remember is that hot moist climates have a much faster rate of organic matter decomposition and require more frequent mulching. In cooler climates, with long winters, the mulch

will break down at a much slower rate. If you are not sure, you can contact the local county extension agent's office or the horticultural department at a nearby university for detailed advice for a given locality.

A few mulches have been shown to hurt plant growth (allopathic) these include black walnuts, eucalyptus (blue gum), tansy, wormwood, and French marigolds.

Black polyethylene roll type plastic mulches often look bad, absorb excessive heat (if not covered by an organic mulch) essentially cooking the root systems of most plants. In wet years the plastic often traps too much moisture in the root zone drowning plant roots and creating a breeding ground for disease. The perforated types often only work as a weed block if installed a certain way, and most need a large overlap of material to prevent roots/weeds from growing between layers. Also the use of plastic mulches creates indirect and hidden costs to society related to environmental issues, the direct cost of removal, collection and waste-disposal. Recent studies are finding that while plastic mulches help to obtain yields earlier in the season than bare ground, total yields over the entire season is often higher from bare ground.

Next week we will start looking at different types of mulch available in our garden centers and the pros and cons of each.

JOHN'S TIP OF THE WEEK:

Last week we had a customer asking about snail and slug control. Due to the drought the last couple years they have not been a major problem for most gardeners. The most effective (and lowest cost) slug and snail control I have ever used is baby ducks. For many years I would go to Wabash Antiques and Feed on Washington and buy a couple baby ducks and keep them in my backyard. They love to eat slugs and snails and will almost fight over whom gets to eat them. They will stick their beaks into every nook and crevice looking for them. The ducks then leave a nutrient rich duck poop behind to fertilize the plants. When they were old enough they would just fly off over the fence and be gone. However, they knocked back the slug and snail populations so much that they were no longer a problem often giving me two years of control! As a side benefit they also eat lots of other pest insects, including mulberries that dropped from my tree, etc. turning them all into rich poop. God knew what he was doing by providing a natural pest control that enriches the soil in the process. A modern gardener studies nature and copies how pest control is done. It works better, costs less, and no toxic side effects. In other words what has become known as "Organic Methods".

Note: In reference to Skip Richter's thoughts concerning the Firespike problem mentioned in Brenda's article above, please see the paper "Killer Compost" at http://natureswayresources.com/resource/infosheets/killercompost.html

WHAT TO DO IN THE GARDEN THIS MONTH

By Brenda Beust Smith

The Lazy Gardener

APRIL
This month, you really should . . .
* Move orchids outside in shady spots. Use in baskets, or hang from fences, limbs or walls.
* If necessary, prune spring-blooming shrubs, such as azaleas, quince, wisteria, forsythia
and climbing roses after flowers fade. Don't plant wisteria near trees!
* Keep grafted roses well watered, but make sure none of your water runs off into the sewers.
(Fertilizers & other lawn chemicals are damaging our bayous & Galveston Bay).
* Feed all container plants. Feed hibiscus with hibiscus food or a low phosphorus fertilizer.
* Plant caladiums in slightly acidic soil with good drainage.
* Plant new shrubs before it gets any hotter and keep newly set-out plants well watered.
* Cut flowers to extend blooming season.
* Pinch tips from coleus, copper plants to make them bushier.
If the spirit moves . . .
* Fertilize azaleas, magnolias, hydrangeas, irises with azalea food.
* Plant Easter lily bulbs in the garden after they finish blooming inside.
* Consider ornamental grasses in among your flowers. These add eye-interest by providing varied leaf textures and shapes. Nurseries carry many new varieties now.
* Water, mow often to make St. Augustine fill in dead areas more quickly.
* Plant bush beans, cantaloupe, cucumbers, eggplants (plants), peas, peppers, pumpkins, squash, watermelon. Put in large, well-established tomatoes so they bear fruit quickly.
* Seed bare sunny areas with fast growers such as cosmos, tithonia and other sunflowers.
* In the water garden, fertilize hardy lilies after they start to grow. If they aren't blooming as well as they used to, they may need dividing and repotting.
If you're really feeling energetic . . .
* Start an herb garden with basil, chamomile, mints, thyme, sage. Plant basil and chives around plants susceptible to whitefly. Plant squash on small hills to discourage problems.
* For larger caladium leaves, remove the largest "eye" or bud.
* Give tomatoes a light feeding of nitrogen when fruits are golf-ball size.
* Mulch tomatoes, peppers, eggplants. Newspaper under mulch slows weeds.
* Try shredded sandpaper, crushed egg shells and/or seaweed at base of plants to discourage snails/slugs. (Better yet, get rid of plants eaten by snails/slugs.)

* Check with County Extension Agents about pecan grafting workshops this month.

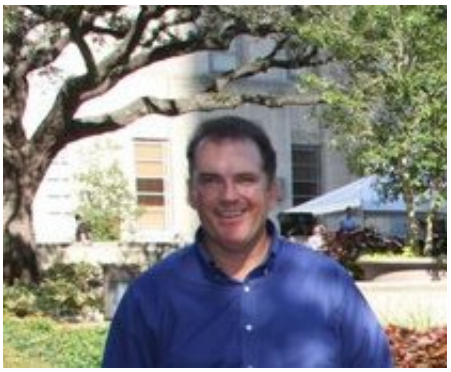
Great Don't-Do tips for really Lazy Gardeners

* Don't panic over silky white webs on tree trunks. Bark lice - good bugs at work!
* Don't treat for problems before you see actual damage. (See Insect Removal, Page 29).
* Don't seed bluebonnets or most other wildflowers now. Put in plants. Plant seeds in fall.
* Don't remove spent foliage from amaryllis, daffodils, irises, lilies. Let it die naturally.
* Don't overfertilize. Leaf spots, dark areas on older plants may result.
* Don't overwater. Leaf drop can result. (Also is a sign of underwatering!)
* Don't plant larkspur, hollyhocks, stocks, delphiniums or snapdragons now. It's too hot.

The monthly gardening activities information above was excerpted from "The LAZY GARDENER'S GUIDE." See below to find out how to get the complete guide:

"THE LAZY GARDENER'S GUIDE ON CD" - Specifically for Houston Area gardens - WHAT TO DO EACH MONTH - when to fertilize, prune, plant what where, best plants for sun, shade, butterflies, hummingbirds,etc. Based on Brenda's quirky 40+ year Houston Chronicle Lazy Gardener column. PDF format, print out only the month you need. $20 total, checks payable to Brenda B. Smith. Mail to: Lazy Gardener's Guide on CD, 14011 Greenranch Dr., Houston, TX 77039-2103.

GARDENING Q&A WITH MARK BOWEN



We have been getting lots of questions lately regarding pH. Mostly the questions have been concerning how low the soil pH should be to grow certain plants (mostly vegetables, blueberries and ornamentals thought to be acid lovers like azaleas, camellias and such).

The great news is that there is no need to worry as much as gardeners often do when others warn them about pH issues.

From an organic gardening perspective, it is believed that plants that are conventionally thought to love low pH soils are merely tolerant of low pH soils and will also do well in fertile, high organic matter content, nutrient balanced soils that are close to neutral in terms of pH. The same thinking also applies to plants thought to prefer high pH soils like Texas Mountain Laurel for example.

What does this mean in practical terms?

Let's look at blueberries as an example. At Nature's Way Resources, blueberries have been growing successfully for years in blueberry mix filled test beds that consistently test out at barely

acidic to almost neutral. I have seen this same result time and time again over the years.

The other point that should be noted is that it can be risky to try to manage planting beds by pH alone. Anytime a gardener adds lots of one ingredient like sulfur or lime, they will likely make some nutrients more available to plants and others less available to plants. Sometimes this approach can lead to unintended consequences similar to when gardeners use too much nitrogen and limit the availability of potassium or too much phosphorous and limit the availability or iron. Too much of a good thing in terms of adding nutrients can waste your money and cause lasting nutrient imbalances and plant performance problems. Being from Texas, I am very familiar with the old adage: "if an ounce does, a gallon does better." These days, we are having to rethink that notion and go back to older, more conservation minded thinking that fortunately often saves money and delivers better results.

A simple approach would be to purchase and/or make soils and amendments that were designed or are a good match naturally for the plants you have in mind that have the appropriate soil structure, healthy amounts of finished compost and ideally a wide spectrum of macro and micronutrients at basic levels.

If you do not purchase a soil that has already been supplemented with fertilizer, consider blending 1/3 bag of a balanced, general purpose organic fertilizer like Microlife 6-2-4 into each cubic yard of soil, or add Microlife as a topdressing (and scratch it in with a bow/dirt rake) if your beds are already formed at the rate of 2 lb.s per 100 square feet. If you are working with blueberries, use Microlife Azalea 6-2-4 at the rate of 4-5 lb.s per 100 square feet. In addition to having 6% nitrogen, 2% phosphorous and 4% potassium, this fertilizer also contains 2% iron and 14% sulfur. Furthermore, this fertilizer has been inoculated with a wide variety of beneficial microbes that are known to improve soil health and increase the availability of various nutrients in existing soils to the plants growing in them. Many people add sulfur to lower pH (sulfur does lower pH), but the best reason to use this fertilizer for blueberries and other so-called acid lovers is that it supplies the nitrogen, sulfur and iron as essential nutrients that these plants need and benefit from directly.

Another important point to keep in mind is that soils that are very rich in high quality organic matter (like finished compost) will tend to be more moderate in terms of pH readings (6.8-7.1 or so). It is well established that compost buffers extreme pH conditions in soils. It is also becoming increasingly well known that soils that are gardened organically will produce excellent results within a more moderate pH range. What too many people do not yet realize is that soils that are managed conventionally with chemical fertilizers, fungicides, etc and are devoid of high quality organic matter in sufficient quantities are often very imbalanced in terms of available nutrients. These soils are also often very deficient in microbes that help make nutrients available to plants. As a result, these chemically compromised soils produce plants with various nutrient deficiencies and other chronic problems that are not caused by low or high pH but rather by misguided management practices and unnecessary inputs.

The great news is that a very simple, balanced organic management program will generally clear up most soil nutrient and other imbalances. For more information about organic programs, consider the book "The Organic Manual" by Howard Garrett. For more information about how nutrients work, consider the book "Teaming With Nutrients, The Organic Gardener's Guide to Optimizing Plant Nutrition" by Jeff Lowenfels. If you want to get real serous on the subject, read The Albrecht Papers by Dr. William A. Albrecht.

Yours in organic gardening,

Mark Bowen

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