

Garden Thyme

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2017



A Year in Review by Denise DeBusk

During my first year as an agent, it has been a year of transition for many of the seasoned Master Gardeners and a year of new beginnings for our most recent MG graduates. I now have a year under my belt and it has been a huge learning curve. I've had my ups and downs and have never felt busier in my life, but I'm starting to feel more comfortable with the job and how the MG program works. As I prepared my annual report for UF/IFAS in November, I was able to reflect on the year and dig deeper into what the Master Gardeners do with their time. Although I am not always able to capture all the impacts you all make in individuals' lives, I am able to capture the sheer amount of work you all do. You all volunteered 8,726 hours and contacted 10,299 residents and youth. Here is the breakdown of some of that time.

- Led 59 classes, docent tours, and workshops in Florida-Friendly Landscaping and edible gardening topics to other Master Gardeners, homeowners, and garden club members, volunteering over 256 hours and educating 1,101 participants.
- Twenty-four MGs provided 496 hours conducting site visits for FFL yard recognition, visiting homeowner's associations, and planning and tabling events.
- Dedicated 1,100 hours to horticultural therapy and maintaining Wilmot Gardens with 672 contacts. This year many of the MGs helped patients with the autism study in the greenhouse.

- At the Master Gardener Help Desk, 29 MGs served 881 hours, answering 985 phone calls, emails, and office visits on various horticultural topics.
- Over 900 hours were dedicated to maintaining 7 public gardens around the county serving diverse communities, and providing residents opportunities to learn about the garden while the MGs were there. In 2016, the Master Gardeners received 3 City of Gainesville Beautification Awards for the following gardens: Cofrin Nature Park Renovation and Survivors of Suicide Loss Memory Garden, Butterfly Hill at Kanapaha Botanical Gardens, and Entrance at Cynthia Moore Chestnut Park and Clark Butler Nature Preserve.
- Twenty-eight MGs volunteered 303 hours to maintaining the grounds and vegetable demonstration garden. These gardens are used heavily for tours during classes.
- Tabled at 10 events, reaching 1,132 residents.
- Volunteered at 11 school gardens, providing 714 hours in volunteer services and making 2,838 contacts through educating children. The MGs also started a new school garden at Hawthorne Middle/High School installing 3 raised garden beds.

Thank you for taking time out of your busy lives to help me work toward the greater goal of educating residents about gardening, leading to lives changed and the conservation of the environment. Raise your glasses to 2017 and a good year in the Master Gardener program!

The Moving Classroom by Laurel Greene, MG 2016

How often do students ask if they can hang around after class for a while? Not usually, but it was clear it would be an unusual class when the teacher stands in front of two rows of beautiful peach trees and says pretty much, If I had my way, the whole bunch would be bulldozed.

The teacher, Bob Hochmuth, Suwanee County Extension Office, Center Director Vegetables and Small Farms, was introduced as “the guy who can tell you pretty much everything about what’s going on.” What’s going on in Live Oak is the Small Farm & Alternative Enterprises program designed to boost Florida’s agricultural economy. In the two or so hours that followed, Bob gave the Master Gardener Class of 2016 a guided tour of the sustainability farm projects, and for some, he presented a whole new idea of sustainability. As Bob looked over the trial peach orchard he explained how most peach varieties don’t really get enough chilling hours in Florida, how susceptible to diseases they are, how much care they need - fertilizer, water, pruning, frost protection, on and on. So peaches aren’t really sustainable for Florida agricultural purposes. But Bob went on to comment, “But for Master Gardeners, when you are on the help desk, you need to know: the fruit tree people want to plant outside their door is - a peach.”

Bob and Lei Loni Davis continued with the group through plums, grapes, olives, chestnuts, pecans, blueberries, persimmons, pomegranates, figs, Mayhaws, and of course, citrus plants. MG trainees learned about trap crops (and no one who was there missed the final exam question, “What type of pests do sunflowers trap? Answer: stink bugs”) as Loni used a butterfly net to illustrate how many of the bugs were in trap crops near the end of the tour. (Everyone knew how many chilling hours peaches need, too!)

Unfortunately, the hydroponics area was closed. But many of the trainees lingered, asking questions, and many vowed to return.

Baker County Extension Office not only has a meeting room to be envied, but the Baker County Arboretum and Teaching Gardens, located in Macclenny, Florida is an outstanding place for Master Gardener Trainees to practice using a tree identification key.

Relying on earlier botany lessons (leaf structure and patterns; for example), trainees used a dichotomous key provided by Horticulture Agent Alicia Lamborn to work their way around the arboretum. Some of the trainees had never seen some of the species in the arboretum. Trainees needed that key to answer an exam question later.

Master Gardener trainees toured Kanapaha Botanical Gardens with focus on the camellia and azalea gardens, with detailed information provided by MG Irma Velez about pruning, canopies, diseases and care, followed by a walk through the Children’s Garden, the Butterfly Garden, and the Water Feature Gardens, led by Karen Hilliard. It’s only fair to admit that several Master Gardener trainees cut short the viewing of the water areas upon sighting a water moccasin (confirmed in the safety of the reception area.)

Oops, running out of space. Just as the MG Trainees had to cram a lot of information into a short period of time, we’ll have to cram a lot of thanks into a short space:

Fast-paced Dr. Carrie Harmon gave the trainees a cram course in plant pathology (exam question: sign or symptom. Do you know the difference?), followed by a tour of the pathology lab.

And this MG class knows where all those little brown soil sample bags go, since they had the opportunity to tour the soil sampling lab.

Carolyn Saft, Education Coordinator, Extension Agent II, Horticulture/Suwannee River Partnership led workshops in the Alachua County Extension Office demo gardens in pruning and in plant propagation. Many thanks for her time, the equipment she provided, and the samples for propagation.

Russ Rice MG was the go-to guy for drip irrigation classes in the demonstration raised beds. Russ talked the class through tools, where-to-buy, and tips. He then took the class to the demo gardens and installed new drip irrigation systems in the beds.

All in all, the Master Gardener Class of 2016 had extraordinary opportunities outside the classroom, indeed, in using the “outside classroom.” They are, and hopefully Florida will be, better for these experiences.

Letter from City of Gainesville Horticulturist

Dear Master Gardeners,

2017, the City of Gainesville celebrates 33 years as a TREE CITY USA, an honor that requires sustained efforts to replenish and diversify the urban tree canopy. As Master Gardeners and stewards of our vibrant neighborhoods and community green spaces the City of Gainesville's Parks, Recreation and Cultural Affairs Department, Urban Forestry Section requests your assistance informing city residents of our TREEMENDOUS Street Tree Sponsorship Program!

The Tree Sponsorship Program is free to city residents. It offers professional site evaluation, assistance with species selection, as well as delivery and installation, plus simple instructions for the care of your new Street Tree(s). The best quality trees (Florida Grades and Standards # 1 or better) will be planted ensuring your Tree(s) longevity, resilience's and aesthetics. Street Tree Sponsors are only responsible for watering the young trees until established, 1-2 years, and monitoring the trees health.

Please refer interested city residents to our Urban Forestry website at www.gnvtrees.org or call our urban forestry phone line at (352) 393-8171.

Thank you for helping promote this TREEMENDOUS Street Tree Sponsorship Program.

Yours truly,

Lacy C. Holtzworth, City Horticulturist (Lacy is a former MG.)

Editor's note: Lacy reports that the north and northwest section of the city has the lowest tree canopy. An aerial view of the tree canopy in Gainesville is available on the tax assessors web-site <http://acpa.maps.arcgis.com/apps/MapTools/index.html?appid=9363cd126a2f4d8aaac5f5768edd3730>

Calendar of Events

Camellia Show @ KGB

Saturday, January 7 from 1 to 5 p.m.
Sunday, January 8 from 9:00 a.m. to 4:00 p.m.

Monthly MG Meeting

Friday, January 20

"Visioning"

10:30 a.m. to 12:30 p.m.

Seed Starting Workshop

Friday, January 13 at Extension Office

10:00 a.m. to 12:00 p.m.

Sign up on VMS (space limited)

Extension Office Garden/

Grounds Clean-up

Tuesday, January 24 from 1 to 4 p.m.

Great Raider Rally

Saturday, January 28 from 9 to 11 a.m.

Join in a city wide effort to remove invasive plants.

Meet at Cofrin Park. Bring gloves & shovels

Sign up on VMS

Annual Recognition Event

Saturday, February 18 from

11:30 a.m. to 2:00 p.m.

UF/IFAS Straughn Center

More details to come - sign up on VMS

Tidbits

- ⇒ Who is on the plant sale committee? On VMS under projects, plant sale, you can find that information. Why not add your name while there?
- ⇒ 2017 International MG Conference will be held in Portland, Oregon from July 10-14. Register by January 13 for reduced rates. <http://blogs.oregonstate.edu/2017imgc/>
- ⇒ The library has two new gardening books. *Carnivorous Plants. Gardening With Extraordinary Botanicals.* Nigel Hewitt-Cooper and *What's Wrong With My Houseplant? Save Your Indoor Plants With 100% Organic Solutions.* Deardorff, D. and Wadsworth, K.
- ⇒ Want to go to a tulip fest in Holland? That is Holland, Michigan. In May, Southern Touch Tours has an eight day trip that includes a trip to Veldheer Tulip Farm. Elaine Gray has high praise for this company.

Satish Gupta, University of Minnesota professor of soil science states, "We need a better understanding of what takes place when chemicals are applied to sources of food and must be more vigilant about regulating what we use to grow food and what we put in our bodies." [2] There has been a question as to whether the antibiotics used in animal rearing can end up affecting food grown using composted manure from these animals.

Antibiotics were discovered in the late 1920s and within 10 years drug-resistant bacteria were also discovered. While the largest impact of antibiotic resistance comes from use in human health, use in veterinary medicine and livestock production is also a significant factor. Farms used to be small family run businesses until the 1940s when farming became industrialized. With the rapid rise of the human population, concentrated animal feeding operations became common. The cramped quarters for the animals caused bacterial illnesses to become an issue, thus the need for antibiotics. These antibiotics are actually given sub therapeutic, 1/10-1/100 the normal therapeutic doses that would usually be given for a short period of time. However these sub-therapeutic doses are given over the lifetime of the animal. Seventy five percent of administered antibiotics are excreted in livestock manure and urine. [1]

These antibiotics can remain active in the soil anywhere from a few days to several hundred days. [2] This leads to antibiotic resistant bacteria found not only in soils on the farms containing the livestock, agricultural farms using the manure from these livestock, but also in locations remote from these farms that have incorporated this manure into the soil. Additionally, some water-soluble antibiotics such as tetracycline in these soils are absorbed directly into plants such as corn, cabbage and green onions. [ibid] So as we ingest these antibiotic containing plants, the same thing happens as when we are prescribed antibiotics by our physicians - our intestinal microflora are adversely affected and we have the potential to have antibiotic resistant bacteria colonize our insides and outsides.

So, does composting, which normally kills bacteria in food when done properly destroy antibiotics in manure and soil? As of 6/27/2016, the FDA was still conducting risk assessments to "determine how much consumer health is put at risk by the use of raw manure as fertilizer in growing crops covered by the product safety rule, and what can be done to help prevent people from getting sick". Note this is "raw" manure. The USDA's national organic program standards call for a 120 day interval between the time of applying raw manure for crops having edible parts in actual contact with soil such as carrots and potatoes, and 90 days for crops with edible parts not in actual contact with soil such as beans, corn and peas. Properly composted manure (heated to 120-160 degrees) is considered safe enough that they have eliminated the previous 45 day minimum application for properly treated and handled compost. [3]

As for antibiotic survival in compost, an article stated that while "high temperature composting of manure designed to kill pathogens is required for crops certified under the USDA label ...growers are not required to check for the drugs." [4] A recent study suggested that antibiotic levels can be reduced by up to 99% with proper composting (again, heated to 120-160 degrees) in a relatively short period of time, under a month. [5]

1- Arielle Lessing, Killing Us Softly: How Sub-therapeutic Dosing of Livestock Causes Drug-Resistant Bacteria in Humans, 37 B.C. Envtl. A . L. Rev. 463 (2010),

<http://lawdigitalcommons.bc.edu/ealr/vol37/iss2/7>

2- Advances in Agronomy, Volume 87 Copyright 2005, Elsevier Inc. 0065-2113/05, DOI: 10.1016/S0065-2113(05)87001-4

3- Managing Black Gold: Animal Manure and Antibiotic Resistance. C. Beecher, Food Safety News, 9 Nov 2015 <https://tinyurl.com/hwv5kyt>

4- Worried about Antibiotics in Your Beef? Vegetables May Be No Better

New studies show vegetables like lettuce and potatoes--even organic ones--may carry antibiotics, Matthew Cimitile, Scientific American, January 6, 2009

5- Fate of antibiotics and antibiotic resistance during digestion and composting: a review, Journal of Environmental Quality 2016, 45:537-545

6- Spellberg, B., G. R. Hansen, A. Kar, C. D. Cordova, L. B. Price, and J. R. Johnson. 2016. Antibiotic resistance in humans and animals. Discussion Paper, National Academy of Medicine, Washington, DC. <http://www.nam.edu/antibiotic-resistance-in-humans-and-animals>.