

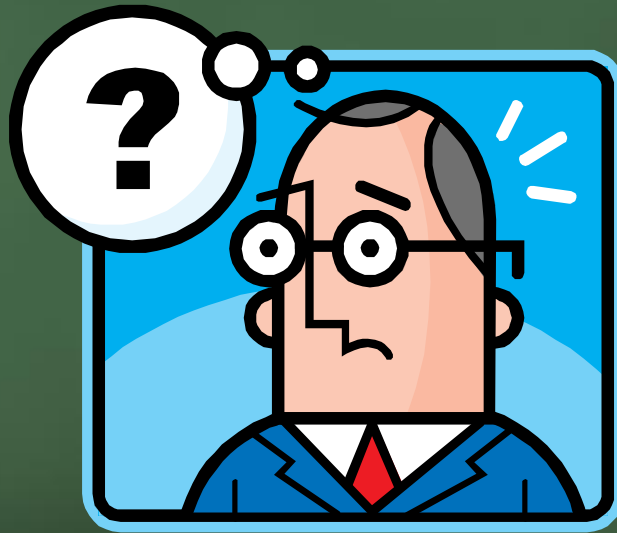
Advanced Master Gardener Training: Improving Service at Plant Clinics

Theresa Badurek

UF/IFAS Urban Horticulture Extension Agent and
Master Gardener Coordinator

Why did we need to develop this?

- Like many counties, our MGs work in plant clinics.
 - Many suffer from low confidence.
 - Some never received sufficient training.
 - Lots needed a “refresher”.
- Some MGs were asking agent and horticulture staff before even attempting to find the answer!



Why did we need to develop this?

- Like many counties, our MGs work in plant clinics.
 - Many work independently at remote Help Desk locations

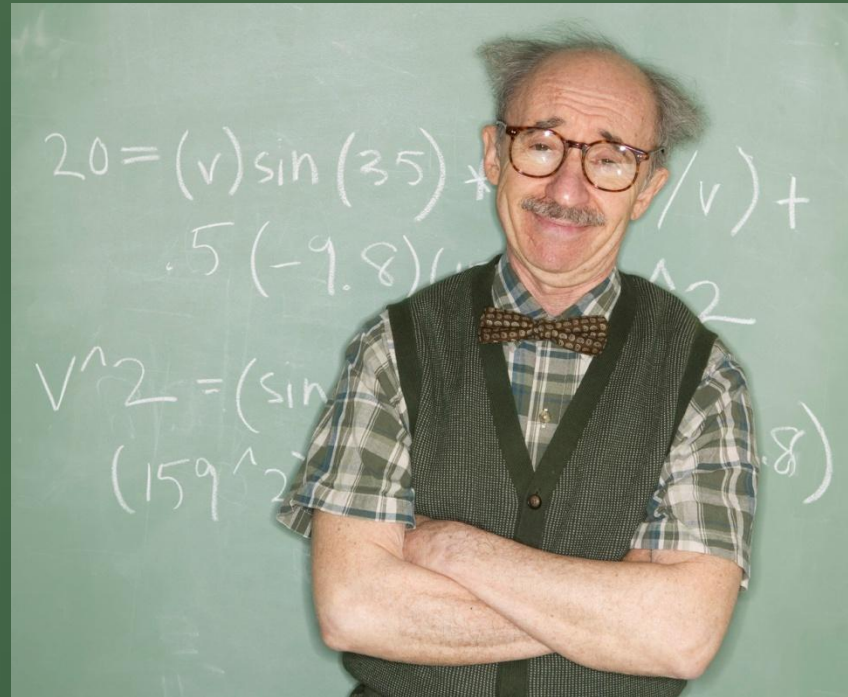


Objective

- To increase the knowledge, skills, and confidence levels of our plant clinic Master Gardener volunteers.



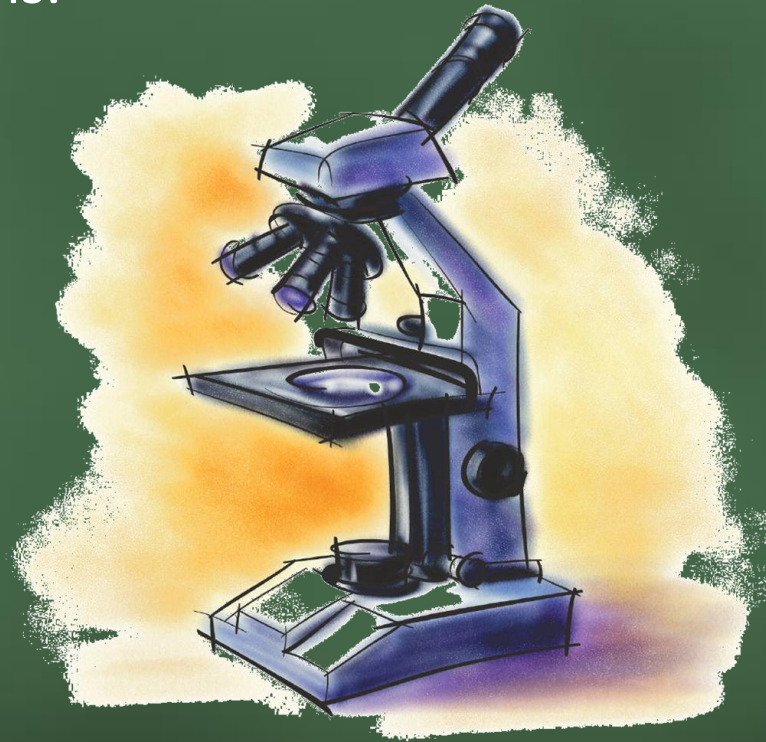
From this...



...to this.

Methods

- Created the Advanced Master Gardener Training Series.
- Listed critical plant clinic knowledge/skill set.
- Each class was a 3 hour session with lecture and activities held once a month for 10 months.



Topics Covered

- Advanced plant ID
- Questions to ask clients
- What resources to use (text and electronic)
- Using a microscope
- Advanced plant pathology
- Common problems of fruit crops
- Common problems of vegetable crops
- Landscape pest ID and control
- Household pest ID and control
- Weed ID and control

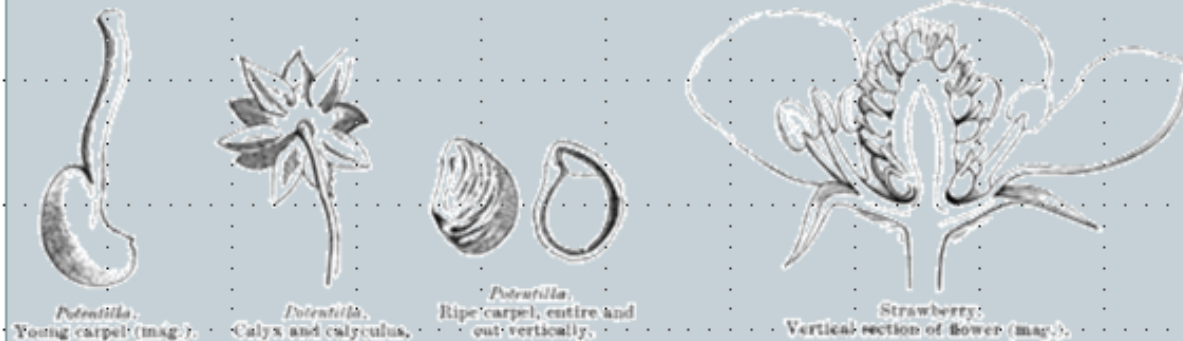


• Advanced Plant ID

Learning common plant family characteristics to aid ID

All in the Family: Learning to Identify Plants by Family Characteristics

THERESA BADUREK,
URBAN HORTICULTURE EXTENSION AGENT



<http://delta-intkey.com/angio/images/rosace81.gif>

Focused on 10 common families found in our landscapes:
ID characteristics,
leaf shapes,
arrangements,
flower morphology,
major genera, etc.

• Questions to Ask Clients

Plant sleuthing...



Lawn and Garden Help Desk Questions

1. What plant is it?

- Variety
- Time in pot or ground
- Seedling, air-layering, cutting, graft, etc.?
- How old is the plant? How long has it been in that location?

2. What does the problem look like?

- Physical damage, flooding, wind, lightning, root zone disturbance, etc.
- Chewed leaves, sucking damage...
- Tracks, leaves rolled...
- Mold, mildew, fungus, conks
- Color, spots
- Drooping limbs, leaves
- Bark damage, root damage

• Questions to Ask Clients

Role playing in large or small groups



• MG plant diagnosis/identification scenario- Oak tree

• “Flo” has come to the help desk with a plant sample.

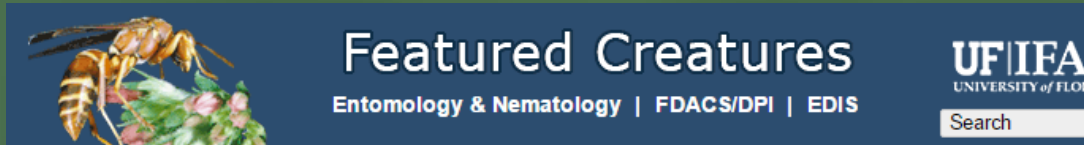
• **Flo:** My oak tree makes such a mess! The acorns fall everywhere and are so sharp to walk on. Is there something wrong with it- the acorns are quite odd. The leaves look just fine and the tree seems healthy.

• How can I keep it from producing so many acorns? I love to go barefoot in the yard!

• *One class member will play Flo, one or two others will be the MG assisting them at the Lawn and Garden Help Desk.*

Resources

Books, websites, posters, oh my!

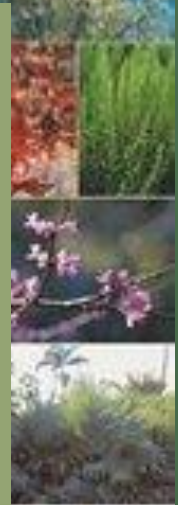


Founded in 1996, Featured Creatures provides in-depth profiles of insects, nematodes, arachnids and other organisms. The site is a cooperative venture of the University of Florida's [Entomology and Nematology Department](#) and the Florida Department of Agriculture and Consumer Services' [Division of Plant Industry](#).

Search Featured Creatures



Follow UF Entomology



• Using a Microscope

Not everyone knows how to do this!

- Microscope history
- Tour of a (stereo) microscope
- Looked at various samples one might use the 'scope for at the help desk (so fun!)



Zoom control-
increase
magnification

• Using a Microscope

Quiz and hands-on use of microscope to solve a problem.

Microscope Quiz



Word Bank:

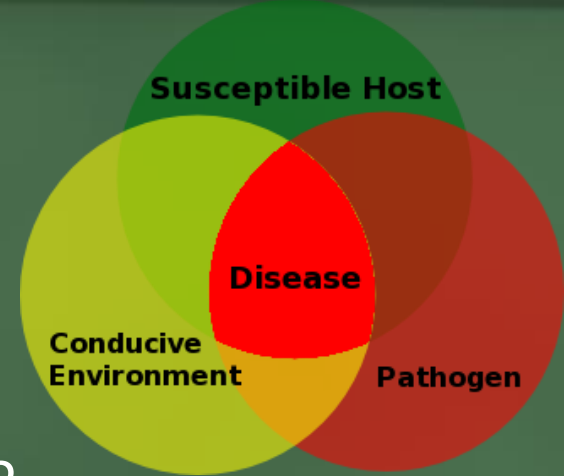
- a. Zoom control
- b. Trinocular port
- c. Stage plate
- d. Eyepieces
- e. Light
- f. Stage clips
- g. Focus control
- h. Objective

Questions:

1. What kind of microscope do we generally use at the Help Desk? _____

Advanced Plant Pathology

The disease triangle and cultural practices



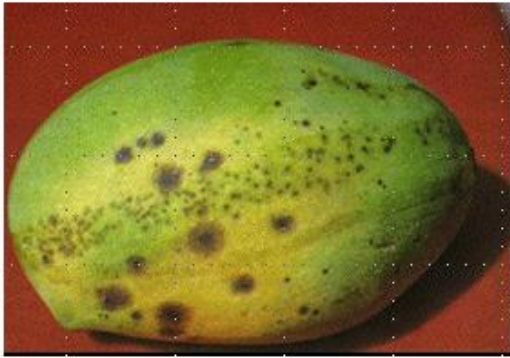
- How do client behaviors influence plant health?
- How can we counsel them to improve cultural practices and use IPM principles?



Common Problems of Fruit Crops

Fruit tree frustrations

MANGO- Anthracnose



- Appears as dark brown to black spots
- Can cause extensive fruit rotting
- Can invade the skin of young fruit and remain latent until fruit ripening begins

Black Sigatoka



http://www.fred.ifas.ufl.edu/iatpc/archive/CPTC_07-09.pdf

Photo: UF-Center for Tropical Agriculture

Papaya Whitefly



Common Problems of Vegetable Crops

Common struggles for the home gardener

Pests

- Diseases



- Insects



- Weeds



COMMON PROBLEMS OF VEGETABLE CROPS



Theresa Badurek

UF/IFAS Urban Horticulture Agent



• Landscape Pest ID and Control

Entomology and more!

- What is an insect?
- What makes an insect a pest or beneficial?
- Mouth-parts and feeding damage recognition
- Common plants and their “repeat offenders”



Key Plants and Key Pests in Central Florida Landscapes

Eleanor Foerste, Dr. Cathy Neal, Celeste White
University of Florida Extension

Modified by:
Theresa Badurek, MLA
Urban Horticulture Extension Agent



Household Pest ID and Control

How to keep those critters out of the house!

Damage Food

- Pantry Pests
- Cockroaches



Damage "Stuff"

- Carpet Beetles
- Clothes Moths
- Silverfish
- Crickets
- Cockroaches
- Some Ants



An Introduction to Various Household Pests

Thomas J. Weissling

Assistant Professor of Entomology
University of Florida
Fort Lauderdale Research

Indoor Insects, Spiders and Creepy, Crawly Things



• Weed ID and Control

Is that a weed or a wildflower?

- What is a weed?
- How to ID and control when and where they are not wanted

WEED or Wildflower?



Theresa Badurek, UF/IFAS Urban Horticulture Agent, Pinellas County



Spanish Needles *Bidens alba*



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ENH884

Weed Management Guide for Florida Lawns¹

J. Bryan Unruh, Ramon G. Leon, Barry J. Brecke, and Laurie E. Trenholm²

Weeds can be defined as unwanted plants or plants growing out of place. Proper identification and some understanding of how and why weeds are present in a lawn are important when selecting the best control strategy. Knowing whether or not weeds were previously present in a particular area also helps homeowners prepare control measures in the future. Weed control should be a carefully planned and coordinated program.

Weed Types

Knowing a weed's growth habit is important when developing an effective weed management program.

Broadleaves

Broadleaves, or dicotyledonous plants, have two cotyledons (seed leaves) when the weed seed germinates. Their true leaves have net-like veins and usually have showy flowers.

dallisgrass, bullgrass, annual bluegrass, alexandergrass, cogongrass, torpedograss, and smutgrass.

Sedges/Rushes

Sedges have triangular-shaped, solid stems, while rush stems are round and solid. Both sedges and rushes favor a moist habitat. Economically important members include yellow and purple nutsedge and, to some degree, globe, Texas, annual, and water sedge, plus path and beak rush and perennial kyllinga.

Weeds are also classified based on their life cycles, which is the period between seed germination and plant death.

Annuals

Annual weeds complete their life cycles in one growing season. *Summer annuals* complete their life cycles from spring to fall. *Winter annuals* complete their life cycles from fall to spring.

There was a “catch”...

- Prerequisite of at least 8 hours of plant clinic time every month to participate, or
- Commitment to 8 hours+, in order to:
 - Increase plant clinic volunteers
 - Ensure info used in plant clinic, not just for personal info



Results

- Very positive response from all- 21 completed the series
- Horticulture program assistants reporting less dependence on them for the answers
- MGs are looking it up before giving up!
- Average of 60% increase in knowledge gain according to evaluations
- **MG volunteers report feeling more confident at the help desk!**



Conclusions

- Alternating years- one year a new MG class, the next year an advanced MG class
- Incorporate into monthly training rotation
- Identify new topics for future-reporting contacts and other admin, customer service
- Separate “track” for new MGs or new help desk volunteers
- Rely on program assistants to carry on
- **Sharing info with other MG Coordinators!**





Thank you! Any questions?
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