

General Plant Problem Diagnosis

Dunwoody Community Garden Workshop
August 11, 2018

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DeKalb County Master Gardener Extension Volunteer



What We'll Cover

- Start strong
- And then...
- The usual suspects
- Where to turn for help

It all starts with the soil

- pH level and nutrients
- Soil composition and preparation
- Drainage

Be picky about your plants!



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Right place...

USDA Hardiness Zone 7B

Full Sun: 6 or more hours of direct sun

Part Sun: 4-6 hours of direct sun

Part Shade: 2-4 hours of direct or dappled sun

Shade: Less than 2 hours of direct sun

Right time

- Summer annuals: AFTER April 15!
- Vegetables: as directed on the seed package or plant stick
- Trees, shrubs, perennials, turf: Fall

Keep it clean!

- Clean up dead leaves, flowers, and fruit
- Remove and dispose diseased plants
- Keep tools and equipment clean

Food and Beverage

- Water: long soaks vs. short sips
- Provide the right amount of water
- Keep foliage as dry as possible and make sure air can circulate
- Mulch properly to retain moisture
- Fertilize prudently! Too much is as bad as not enough!

Conditions

Critters

Crud

Conditions

- What did your soil test say?
- What has the recent weather pattern been?
- What's going on in your neighbor's yard?
- Is it a problem with one plant or many?
- What's been sprayed? Applied?
- Have drainage conditions changed?
- Are pollinators present?



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Herbicide overspray on apples

Glyphosate sprayed on a windy day



Brenda Kennedy, University of Kentucky, bugwood.org

Blossom End Rot

Calcium Issue

Uneven/inadequate watering



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Poor/incomplete pollination
Extreme heat
Not enough water

Good Bugs

Hunters
(other insects and pollen)

Loners

Not Plant Picky

No Plant Damage

Bad Bugs

Gatherers

Hoards

Very Plant Picky

Evidence is Clear

Good Guys*



Missouri Botanical Garden



Cyndi McGill

Sooty Mold



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Aphids

Scale Insects



Lesley Ingram, Bugwood.org



Lorraine Graney, Bartlett Tree Experts, Bugwood.org



Eric R. Day, Virginia Polytechnic Institute
and State University, Bugwood.org

Thrips and Thrip Damage





**Ronald S. Kelley, Vermont Department of
Forests, Parks and Recreation,
Bugwood.org**



David B. Langston, University of Georgia, Bugwood.org

Whitefly



Whitney Cranshaw, Colorado State University, Bugwood.org

Flea Beetles



Ronald S. Kelley, Vermont Department of
Forests, Parks and Recreation, Bugwood.org

Leaf Miner Damage



Gerald Holmes, California Polytechnic State University at
San Luis Obispo, Bugwood.org



Clemson University - USDA Cooperative
Extension Slide Series, Bugwood.org

Spotted Squash Lady Beetle

Mexican Bean Beetle



UGA Extension

Japanese Beetles

Tomato Hornworm



Whitney Cranshaw, Colorado State University, Bugwood.org



Michigan State University Extension



Michigan State University Extension



Michigan State University Extension



Ward Upham, Kansas State University, Bugwood.org



John L. Capinera, University of Florida



University of Minnesota Extension

Cabbage Looper



Whitney Cranshaw, Colorado State University, Bugwood.org



James Castner, University of Florida

Cabbage Worm



James Castner, University of Florida



Lyle J. Buss, University of Florida

Squash Vine Borer



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Garden Myths - Robert Pavlis



Photos: Missouri Botanical Garden



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Moles

Create tunnels and big old mounds of soil

Large snouts and front claws

Adore grubs!

To control:

Eliminate food source

Destroy tunnels



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Voles

Eat plant material only

Create shallow runways

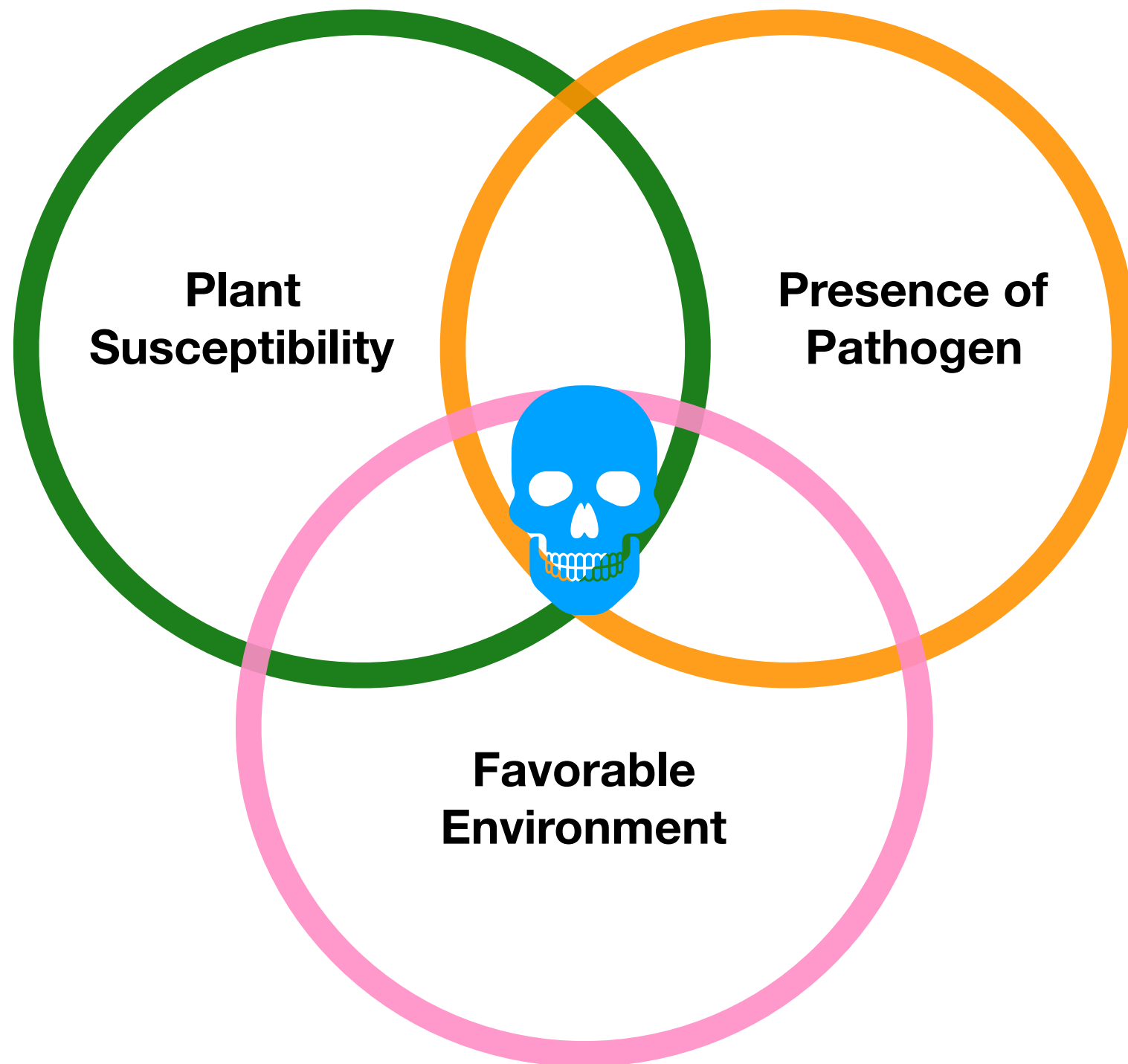
Consume roots and soft woods

To control:

Keep mulch away from plant stems

Use landscape fabric to protect roots and crowns

Plant Disease Probability





John Hartman, University of Kentucky, Bugwood.org

Black Spot



Cyndi McGill

Crown Rot on Pulmonaria



Colorado State University Extension

Powdery Mildew



University of Missouri Extension

Fungi on Tomatoes



Robert L. Anderson, USDA Forest Service, Bugwood.org

Rust



Alfredo Martinez, University of Georgia Extension

Canker



newgarden.com

Leaf Gall



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Fireblight



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Rose Rosette

Integrated Pest Management*

(IPM)

- Inspect and monitor
- Identify the issue
- Learn the pest biology
- Determine action threshold
- Choose tactics:
 - Cultural: Keeping your site clean, rotating plants, selecting resistant varieties
 - Physical: Row covers, water blasts, traps, hand picking, insecticidal soaps
 - Biological: BT, Serenade, Spinosad, milky spore, beneficial insects
 - Chemical: OMRI approved methods such as neem, copper, pyrethrins
- Evaluate results

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“Organic Strategies for the Garden and
Home Landscape”

Help is Available!

DeKalb County Master Gardener Help Desk
404-298-4080
mgardener@dekalbcountyga.gov