

Spring Insect Updates

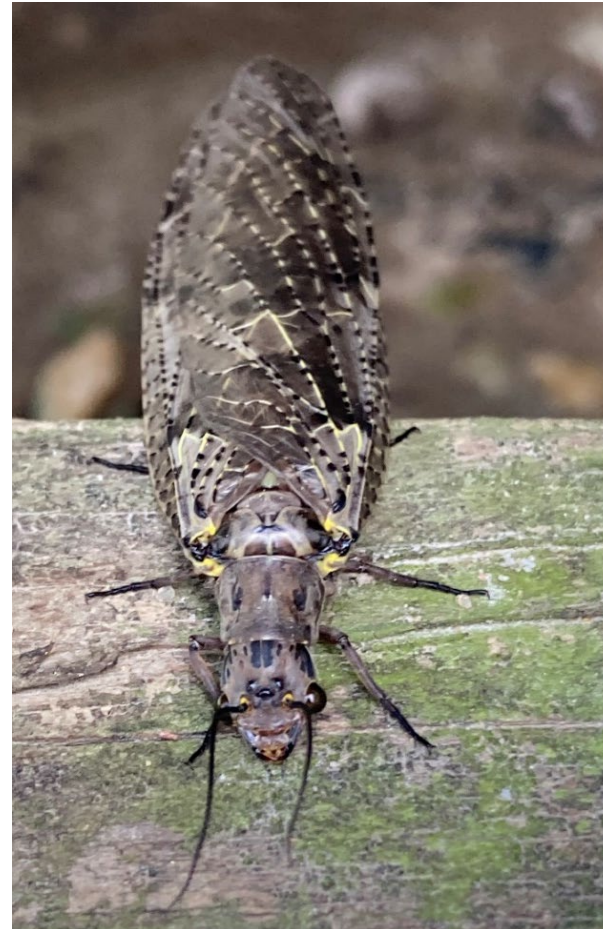
2021 Virtual Ask a Master Gardener
Plant Clinic Training

Emily Zobel

Ag Agent Dorchester County

Dodson Fly

- Find near streams
 - Hellgrammites
 - 1-3 years
- Powerful mandibles
 - Do Not touch
- Adults are short lived



European Hornet vs Cicada Killer



Carpenter Bees



Rose Sawflies

- Bristly Rose Sawfly, Curled Rose Sawfly, Rose Slug Sawfly,
- Skeletonization, defoliation, brown crinkled leaves
- Feed in groups on undersides of leaf



Bristly Rose Sawfly vs Curled Rose Sawfly vs Rose Slug Sawfly



Rose Sawflies

- Early detection is key
- Hand remove
- Prune out damaged leaves
- Chemical: Read label and follow the directions
 - Insecticidal soap – small
 - Spinosad
 - Do Not Use Bt



Bagworms



Spring Scales

(May – June Crawlers)

- **European elm scale**
- **Euonymus scale**
- **Japanese maple scale**
- **Lecanium scale**
- **Calico scale**
- **San Jose Scale**
- **Cotton Camellia Scale**
- **Pine Needle Scale**
- **White Peach Scale**
- **White Prunicola Scale**
- **Fletcher Scale**

Spring Scales General Control

- Prune out heavy infested areas
- Wash the reachable branches with a mild soap solution and a soft scrubbing brush
- Manage crawler with horticultural oil or Insect Growth Regulator
- Soil drenches with systemic insecticides



European Elm Scale



Euonymus Scale



Two generations per year

Calico Scale



Lecanium Scale



Japanese Maple Scale



San Jose Scale



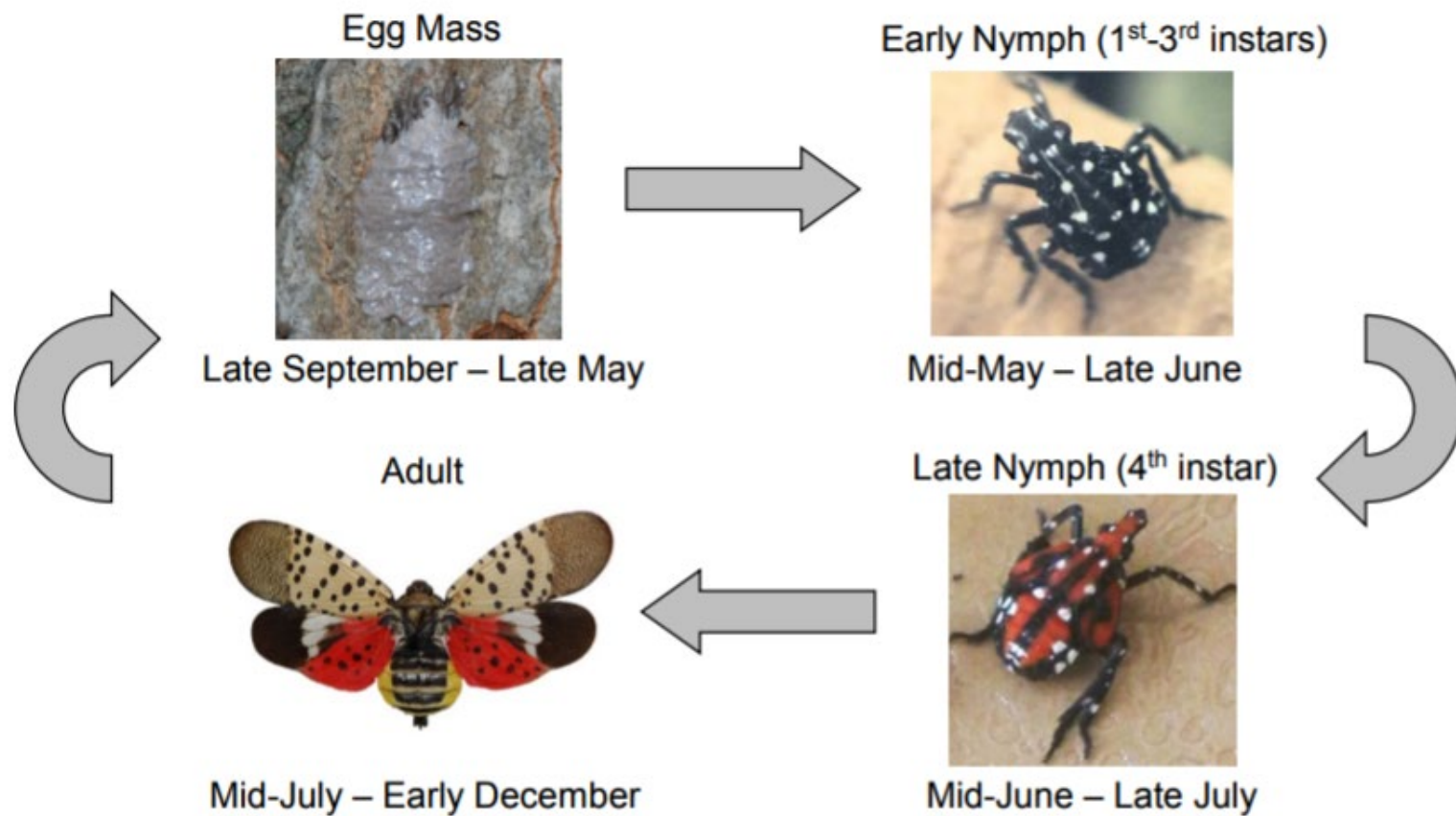
Cottony Camellia Scale



Lace Bugs

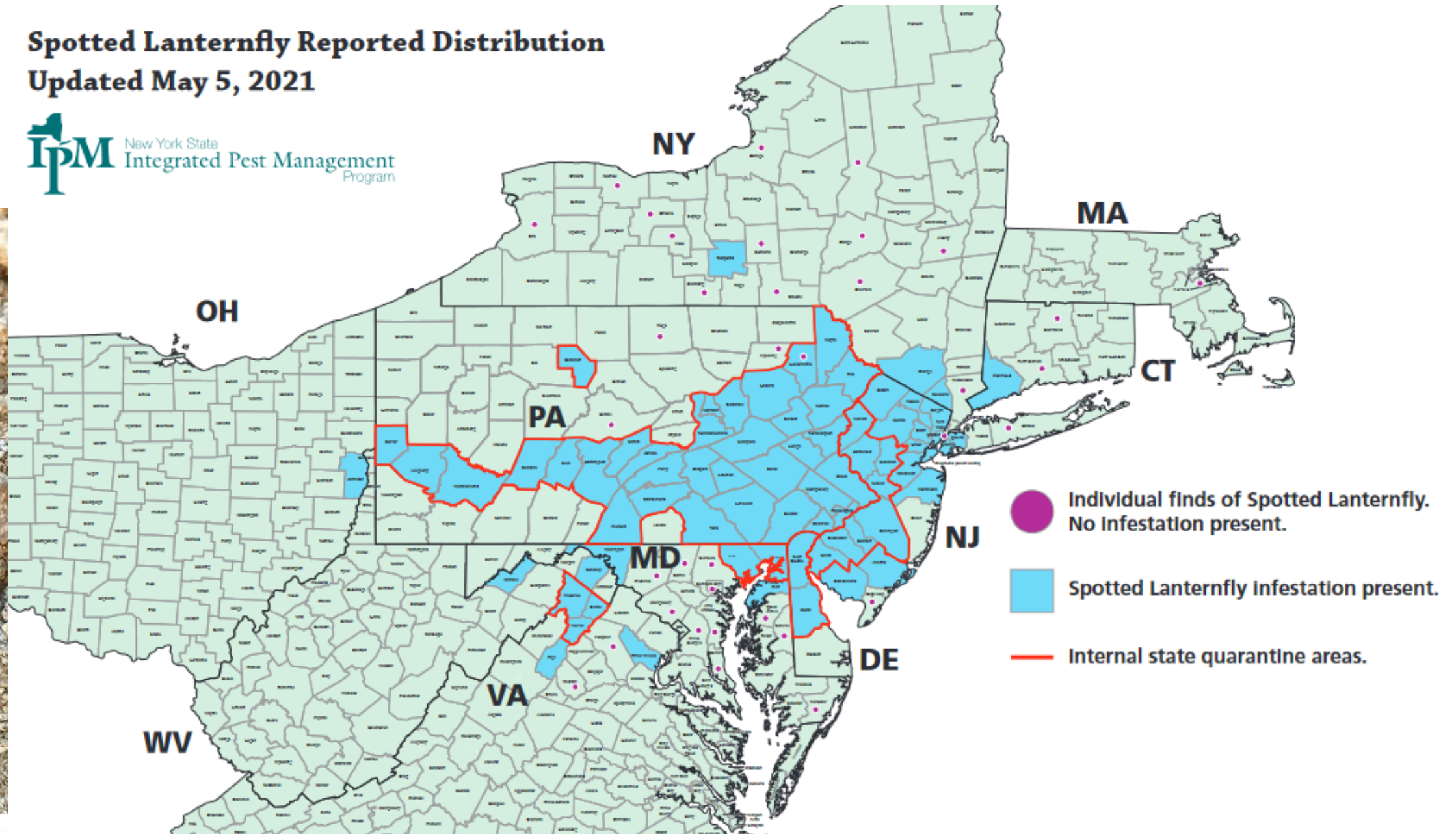


Spotted Lanternfly



Spotted Lanternfly Reported Distribution

Updated May 5, 2021

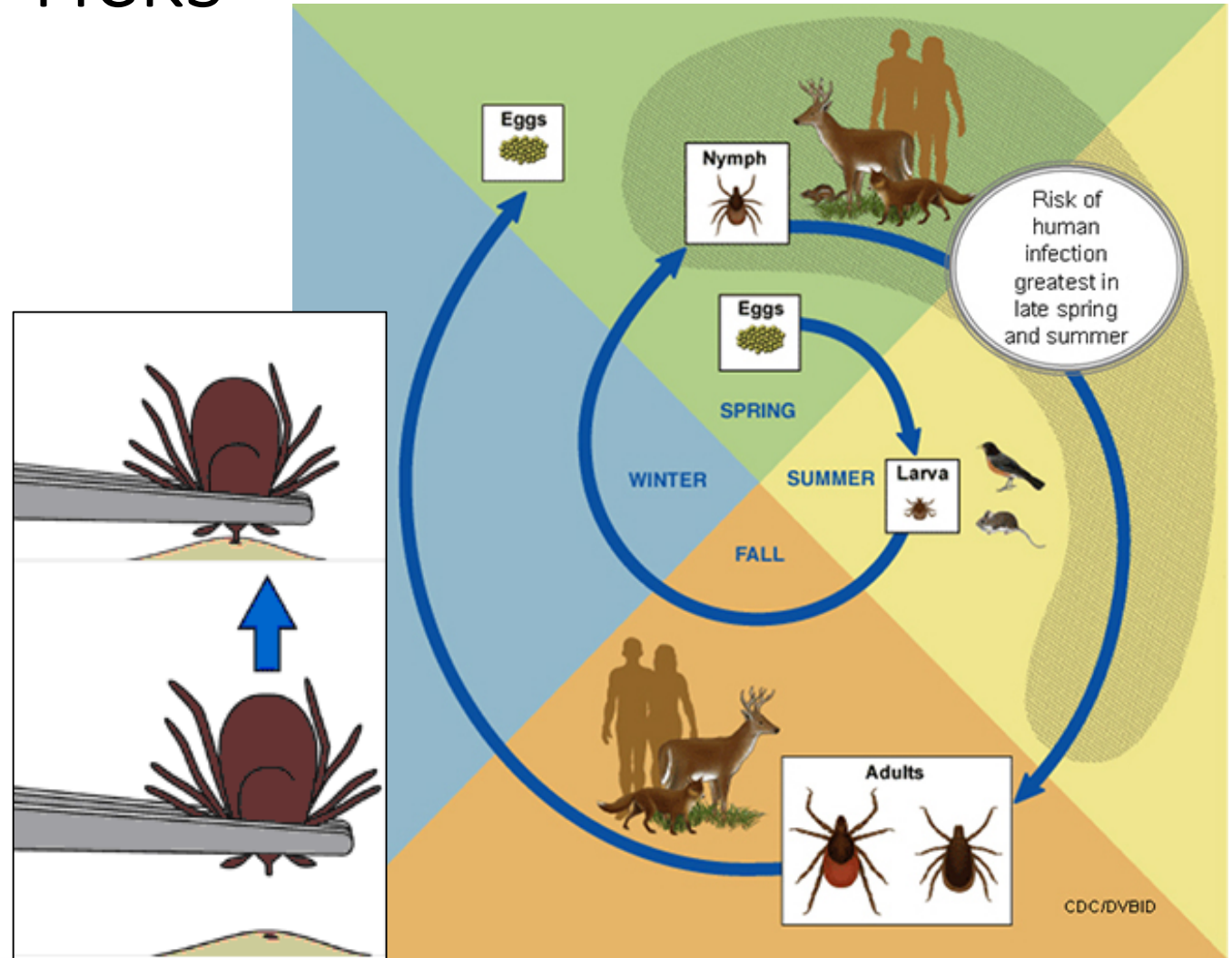


Slugs and Snails



Ticks

- Active any time it's above freezing
- Wear long pants and long sleeves
 - Tuck pants into socks
- Treated clothing *permethrin*
- Use DEET open skin



Mason Bees

- Native solitary bees
 - Nest sites are often hollow stems or crevices
- Emerge early spring (50° F)
- Foraging range is about 100 yards



Mason Bee Homes

- 3/32 – 3/8 inch diameter, 6-8 inch long
- Move to non heat garage or shed for winter
- Keep Clean
 - Replace tubes every year
 - Bleach and water solution every other year
 - Once the new bee emerges in the spring before eggs are laid

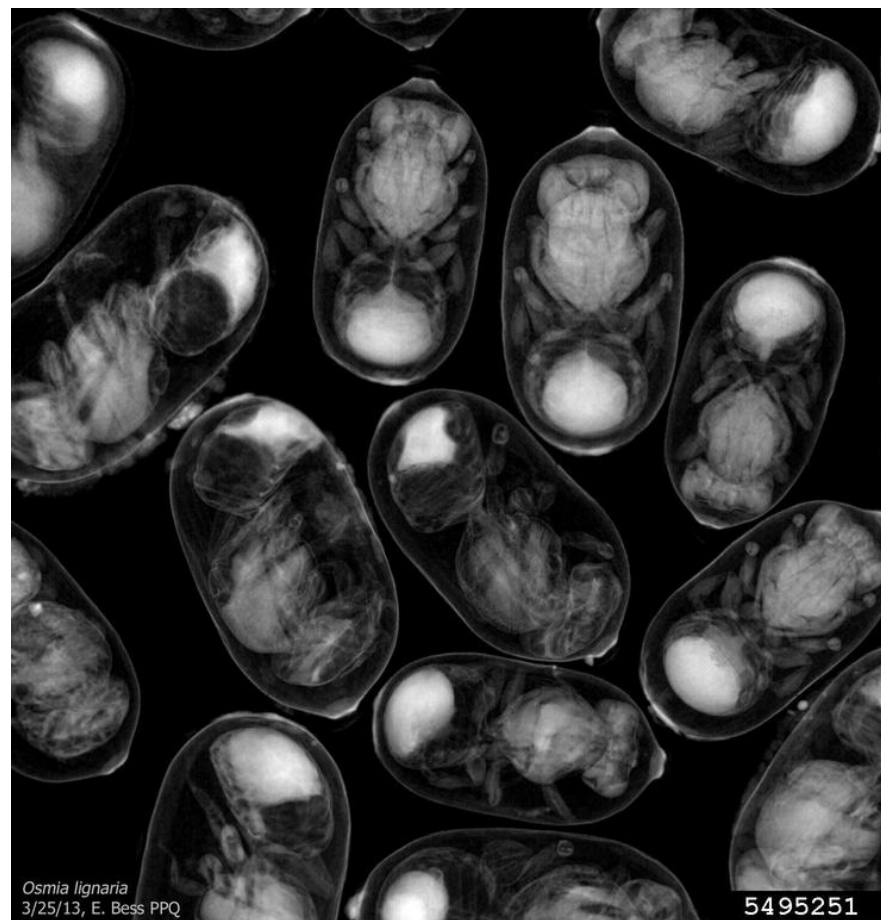
Hole Diameter		Bees Expected
in	mm	
●	3/32 2.4	Polyester bees
●	7/32 5.6	Hornfaced bee
●	15/64 6.0	Leafcutter bees
●	1/4 6.4	
●	19/64 7.5	Various mason bees
●	3/8 9.5	Carder bees
●	1/2 12.7	Blue orchard bee

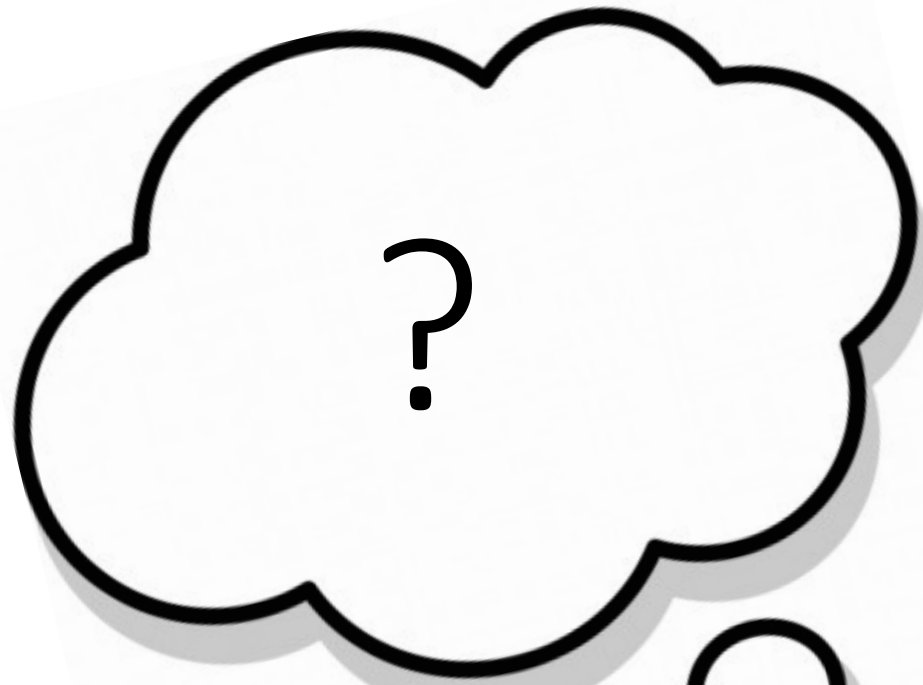


Mason Bee Homes

- Make a Emergence Chamber
 - Place tube or house in box or dark bucket with lid
 - Cut small hole in bottom/side for bee to exit
 - Place next to new house for whole year

<https://extension.psu.edu/mason-bees-in-the-home-garden>





Emily Zobel

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[Teaching Effectiveness https://go.umd.edu/ENRTEACH](https://go.umd.edu/ENRTEACH)

2021 Selected Landscape Plant Diseases May Master Gardener Clinic Zoom Training

UNIVERSITY OF
MARYLAND
EXTENSION



D.L. Clement
University of Maryland
Extension Specialist

Cold Damage on Dogwood



Steve
Sullivan

Hydrangea Cold Damage



Examples of Pathogenic Fungi

Sycamore anthracnose



Anthracnose canker



Beech Anthracnose



Photo:
Nancy
Gregory, U
Delaware

Cherry Shot Hole



Cherry Shot Hole on Cherry Laurel



Cherry Shot hole



Cherry leaf drop



Resistant Shot Hole Cherries

- First Lady



- Dream Catcher



Cherry Shot Hole Management

- Chemical
 - Propiconazole
 - Thiophanate-methyl
 - Myclobutanil
 - Orkestra Intrinsic (fluxapyroxad and pyraclostrobin)
- Cultural
 - Thin canopy and remove twig cankers in the spring

Guidelines for Fungicide Recommendations

- Will not cure visible symptoms
- Preventative action only, not curative
- Require repeated applications on regular intervals
- Expensive
- Need thorough coverage of plant parts
- If intervals are skipped or lengthened control may be compromised
- Organic and biological options are limited and in some cases unpredictable

Elsinoe spot anthracnose on Dogwood Flower Bracts



Dogwood with Elsinoe 2021



Discula Anthracnose of Dogwood



Powdery Mildew Spore Chains



Kentucky Pest News

Powdery Mildew on Euonymus



NCSU
image

Powdery Mildew on Crepe Myrtle



Mildew Resistant Crepe Myrtles

- Semi-dwarf (15 feet) – Acoma (white), Caddo (pink), Hope (blush-white), Pecos (pink), and Tonto (red). Intermediate (up to 20 feet) – Apalachee (orange), Centennial Spirit (dark red), Christiana (deep red), Comanche (coral pink), Hopi (pink), Lipan (red-lavender), Near East (pink), Osage (pink), Osage Blush (pink), Sioux (pink), and Yuma (lavender). Full tree (over 20 feet) – Basham's Party Pink (lavender pink), Biloxi (pink), Choctaw (pink), Fantasy (white), Kiowa (white), Miami (pink), Muskogee (lavender pink), Natchez (white), Townhouse (white), Tuscarora (coral pink), Tuskegee (pink), Twilight (dark purple), and Wichita (lavender).

Early Powdery Mildew Symptoms on Dogwood



Dogwood with Early Powdery Mildew



Powdery Mildew and Old Elsinoe on Dogwood Late August



Powdery Mildew on Dogwood



Powdery Mildew on Dogwood late summer



Dogwood with Leaf and Flower Damage 2021



Powdery Mildew Resistant Dogwood



Powdery Mildew Management

- **Field Resistance**
 - Cherokee Brave
 - Kousa cultivars and hybrids
- **Resistant** (*C. florida* cultivars)
 - Jean's Appalachian Snow
 - Karen's Appalachian Blush
 - Kay's Appalachian Mist
 - Appalachian Joy (Double Flower Appearance)
- **Fungicides**
 - propiconazole – (Banner)
 - myclobutanil – (Immunox)
 - thiophanate-methyl – (Cleary's)

Other dogwood species resistant to powdery mildew

- Pagoda dogwood *C. alternifolia*
- Bigleaf Dogwood *C. macrophylla*
- Redosier dogwood *C. sericea*
- Silky dogwood *C. amomum*

Canker diseases

- Botryosphaeria canker



Canker Diseases

Japanese Maple Botryosphaeria Die-back





Margery Daughtrey. Cornell

Boxwood Blight

caused by *Calonectria pseudonaviculata*
(= *Cylindrocladium buxicola*, *Cylindrocladium*
pseudonaviculatum)



In October 2011,
confirmed for the
first time in US
- nurseries in North
Carolina and
Virginia, landscape
in Connecticut

**Now found in at least 21
states, including MD,
DE, PA, VA and 3
Canadian provinces**

Stem Symptoms



Brown/black elongated stem
cankers

Kurt Heungens, Belgium

2020 Resistant Boxwoods



2020 Resistant Boxwoods



Cercospora and Xanthomonas Leaf Spots on Hydrangea



Bradford Pear Fire Blight



Texas
A&M

Spur Die Back and Canker caused by Fire Blight



Photo by
William M. Ciesla

UGA1254072

Canker diseases

- Botryosphaeria canker



Canker Diseases

Japanese Maple Botryosphaeria Die-back



Holyhock Rust, *Puccinia malvacearum*



Daylily Leaf Streak



Rose Rosette symptoms



Alan Windham, UT

Rose Rosette Virus



Rose Rosette Virus Disease



Normal New Rose Growth Color



Powdery Mildew on Rose



Black spot on Rose



Cercospora leaf spot on rose, common on blackspot resistant knockout roses



New Beech Leaf Disease

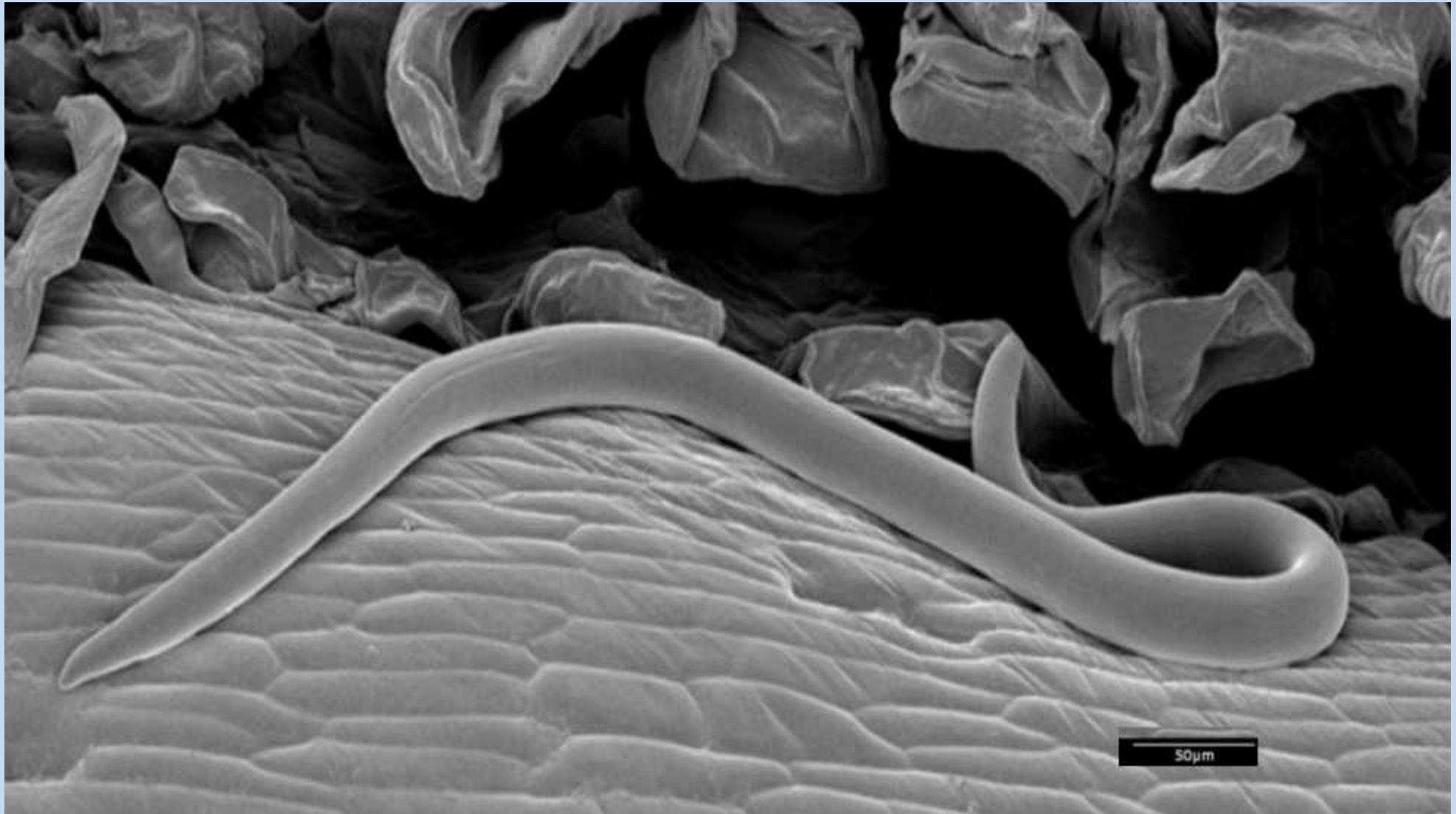


Jim Chatfield, OSU Extension

Beech Leaf Disease Symptoms



Possible Nematode Pathogen



Vegetable and Fruit Update

May 19, 2021

Jon Traunfeld jont@umd.edu

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EXTENSION



ASK A MASTER GARDENER
PLANT CLINIC
A MASTER GARDENER PROGRAM

HGIC resources for MGs and the public

<https://extension.umd.edu/hgic>

- Web pages
- Maryland Grows blog
- HGIC YouTube channel- hundreds of videos
- Ask Extension- answers to garden and pest questions!
- Social Media

Home and Garden Information Center



The Home and Garden Information Center (HGIC) develops and delivers science-based, sustainable gardening and integrated pest management education for better human and environmental health.

The Home and Garden Information Center partners with the **Master Gardener Program** to provide educational resources to the volunteers as well as digital resources through the Home and Garden website.

Find information on



Food Gardening
How to grow your own fruits, herbs, and vegetables in Maryland. Learn all about raised beds, container gardens, and recommended varieties.



Insects
Learn about beneficial insects, insect-friendly gardens and how to identify and manage insects indoors and outdoors.



Yard & Landscape
How to grow healthy plants indoors and outdoors in Maryland, how to identify and manage problems while respecting the environment.

Hot topics



Periodical Cicadas
Prepare for the arrival of Brood III in Maryland!



Starting Seeds
Grow hundreds of plants from seed with just a small investment of time and space!



Organic Lawn Care
Learn to grow a healthy and environmentally friendly lawn!

Connect with us



Ask Extension
Get answers from our team of Maryland Certified Professional Horticulturists, Extension Faculty, and Master Gardeners.



Maryland Grows Blog
Get timely tips about food gardening, soil improvement, troubleshooting plant problems, and supporting pollinators in your landscape.



HGIC Newsletter
Subscribe to our quarterly newsletter for helpful and timely gardening tips.

- Send questions with photos; answers within 48 hrs.
- Master Gardeners and field faculty have joined with HGIC staff to answer questions in 2021
- Qs&As are a good, searchable teaching tool-
<https://ask2.extension.org/>



Ask Extension

Get answers from our team of Maryland Certified Professional Horticulturists, Extension Faculty, and Master Gardeners.

User form

Our team of Maryland Certified Professional Horticulturists, Extension faculty, and Master Gardeners answer yard and garden questions from Maryland and Washington, DC residents only. If you live in another state, please [use this form](#) to select your own location, or contact your local university cooperative extension.

We strive to respond to your questions within 48 hours. For fastest answers, [search our website](#) first. [Read our tips for submitting good photos](#).

- Insect ID: photos need to be close, in focus, in good lighting, include a ruler or coin to show size.
- Plant ID: show the entire plant, preferably with close-ups of flowers or seed heads.
- For plant disease diagnosis: show the transition from healthy to affected plant material. Include information on the age and location of the plant(s) and soil and site conditions.
- Attach files in JPG, PNG, GIF, or PDF format, a maximum of 8MB.

Ask Extension

Give your question a title

Question

Location and County

Maryland ▼

Select Your County ▼

Image (optional)

You can upload .jpg, .png or .gif.

Choose File No file chosen

Choose File No file chosen

Choose File No file chosen

Full Name

Email

Would you like this question to be private?

Leaving this box unchecked helps others by making your question publicly accessible in our [Knowledgebase](#)

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Searchable questions with answers

Question #0019169

Small whitish, hard sac on 2 azaleas.


Question Thread (4) Tasks

sallymerle posted 05/11/2021 8:58 AM Small whitish, hard sac on 2 azaleas.

I just noticed these white crusty sacs/ growths on 2 azaleas. They are abundant. I see none on the other azaleas. So far I see no shrub damage. What is it, and how pro I treat this?
They are non native azaleas, and have been in the woodland edge -yard for years.

[FAC69DD4-5465-4899-972D-661E410D5ED5.jpeg](#) 1 mb

[20C30C62-8218-4604-BF69-56981E26E902.jpeg](#) 1 mb



Created by [sallymerle](#) 05/11/2021 8:58 AM

[Question Filter](#) assigned this to Home and Garden Information Cent University of Maryland Extension 05/11/2021 8:58 AM

[Question Filter](#) assigned this to Maryland Home and Garden Information Center 05/11/2021 8:58 AM

Mira Talabac posted 05/11/2021 10:40 AM

This is a fairly common fungus that, while causing prominent symptoms, doesn't result in any notable health detriment to the plants it infects. You can clip off the affected leaves or stems and dispose of them, and the plant should regrow new foliage either this year or next. Here is a bit more information about this phenomenon: <https://extension.umd.edu/resource/exobasidium-gall-azalea>

Miri

Status: Closed

Priority: Normal

Institution: University of Maryland

Create Date: 05/11/2021 8:58 AM

Submitter: [sallymerle](#) (2) [Manage Collaborators](#)

Email: sallymerle@yahoo.com

Source: API

Closed By: Christa Carignan

Escalation Timeline: Two Working Days

Close Date: 05/12/2021 8:13 AM

Assigned Group: Maryland Home and Garden Info Center

Last Message: 05/12/2021 7:44 AM

Last Response: 05/12/2021 8:13 AM

Question Details

Make question publicly accessible: Yes

Question is safe to have publicly o: Yes

Widget Source: <https://extension.umd.edu>

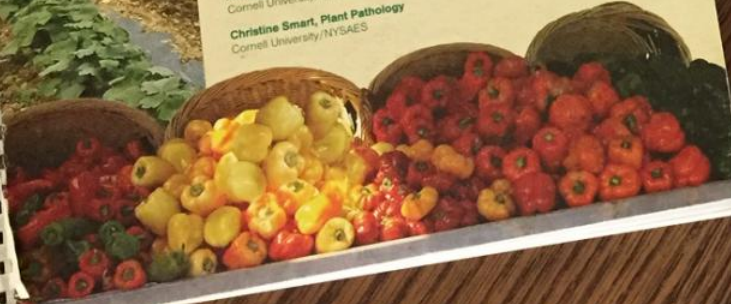
State: Maryland

County: Calvert

HGIC



RESOURCE GUIDE FOR ORGANIC INSECT AND DISEASE MANAGEMENT



Brian Caldwell
Northeast Organic Network

Emily Brown Rosen
Organic Materials Review Institute

Eric Sideman
Maine Organic Farmers and Gardeners Association

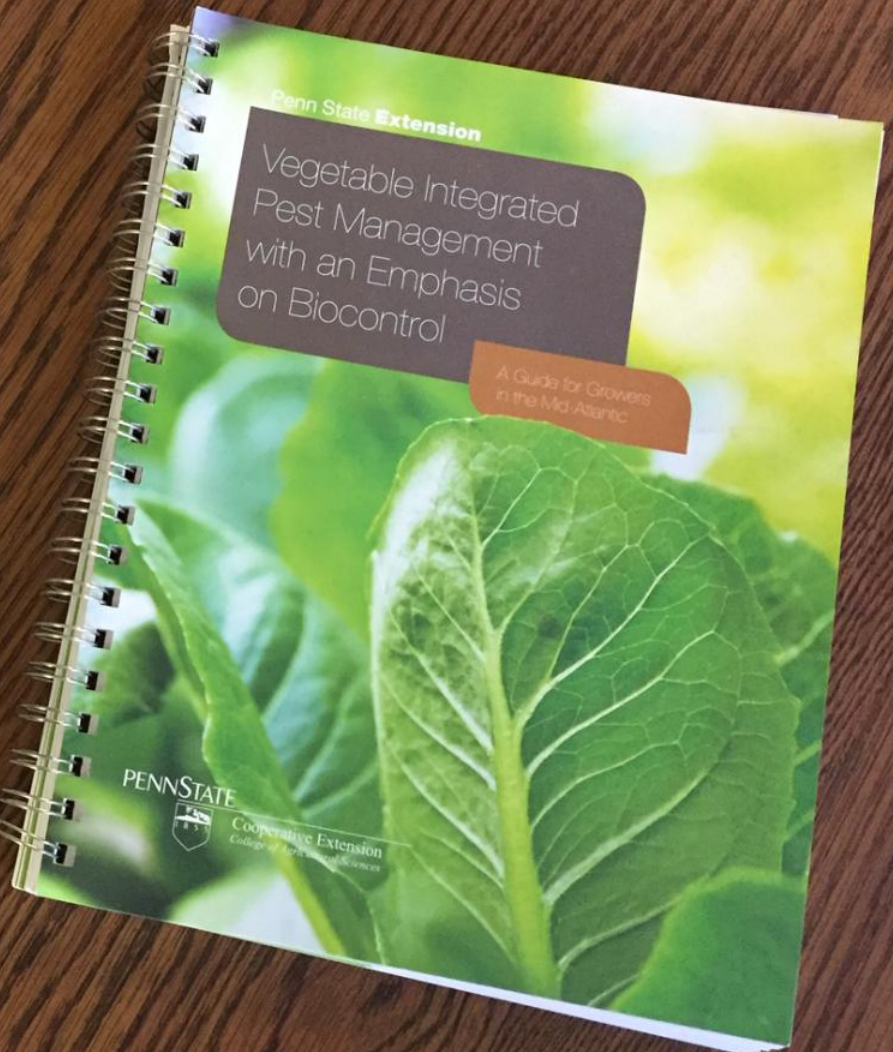
Anthony Shelton, Entomology
Cornell University/NYSAES

Christine Smart, Plant Pathology
Cornell University/NYSAES

Penn State Extension

Vegetable Integrated Pest Management with an Emphasis on Biocontrol

A Guide for Growers
in the Mid-Atlantic



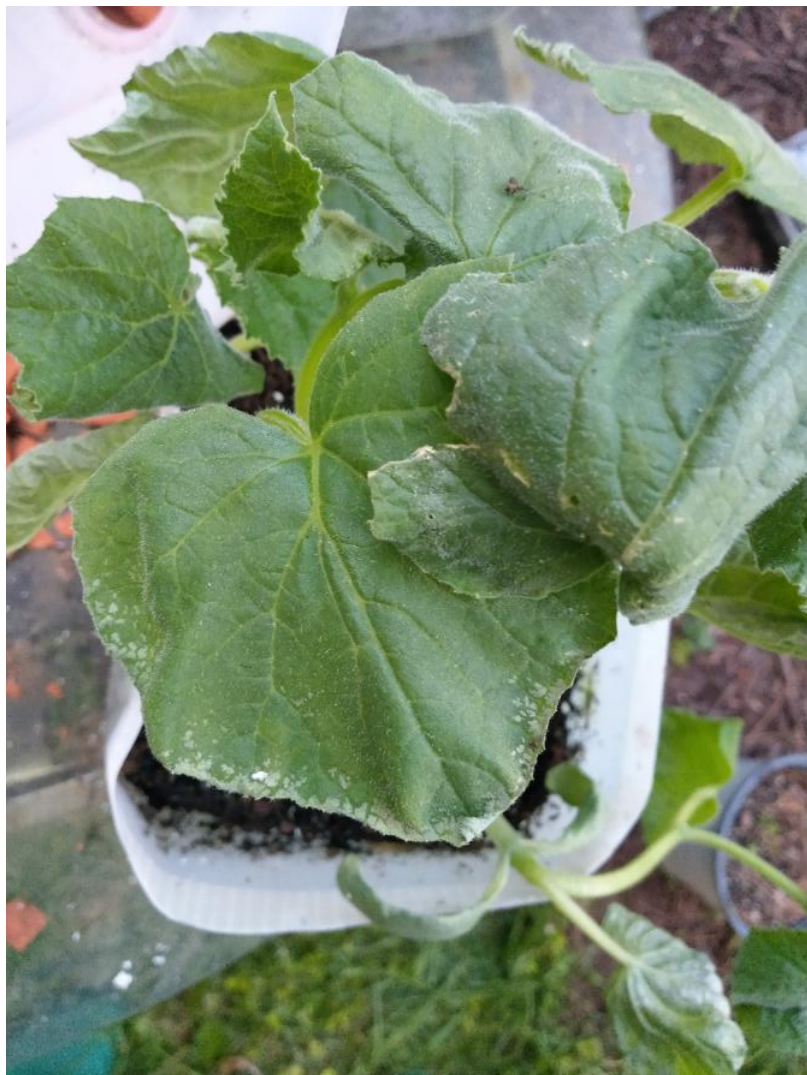
PENNSTATE

 Cooperative Extension
 College of Agricultural Sciences

Tips for working with clients

- Help clients develop realistic expectations
 - cucumber plants don't produce all summer long
 - sometimes you just need rip out the duds and re-plant
- Don't jump to conclusions
- Deep breath; what is the big picture; how serious is the problem?; is it getting worse?
- Teach how to prevent the problem next year; share UME resources.

Early spring weather injury



Button head of cauliflower (stress response)

Some possible causes:

- Too hot or too cold after planting
- Too much time in container
- Moisture extremes
- Insect pests
- Compacted soil



Climate change

- Increasing average temperatures and rainfall and longer spring and fall growing seasons increase insect, weed, and disease pressure



Whitefly adults and nymphs on kale
Dec. 23rd; Montgomery Co.

Photo credit: Christa Carignan



Many aphid species
are active

← Black bean aphids
on rhubarb

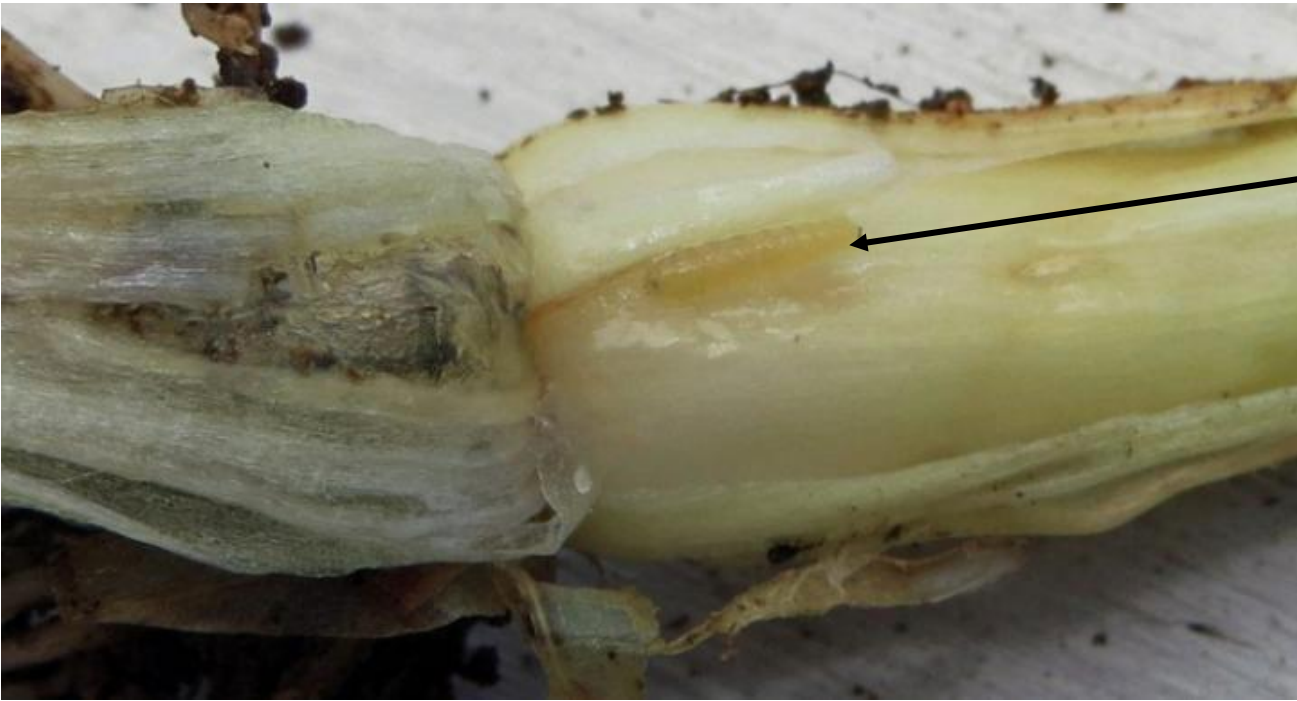
Allium leafminer

Management:

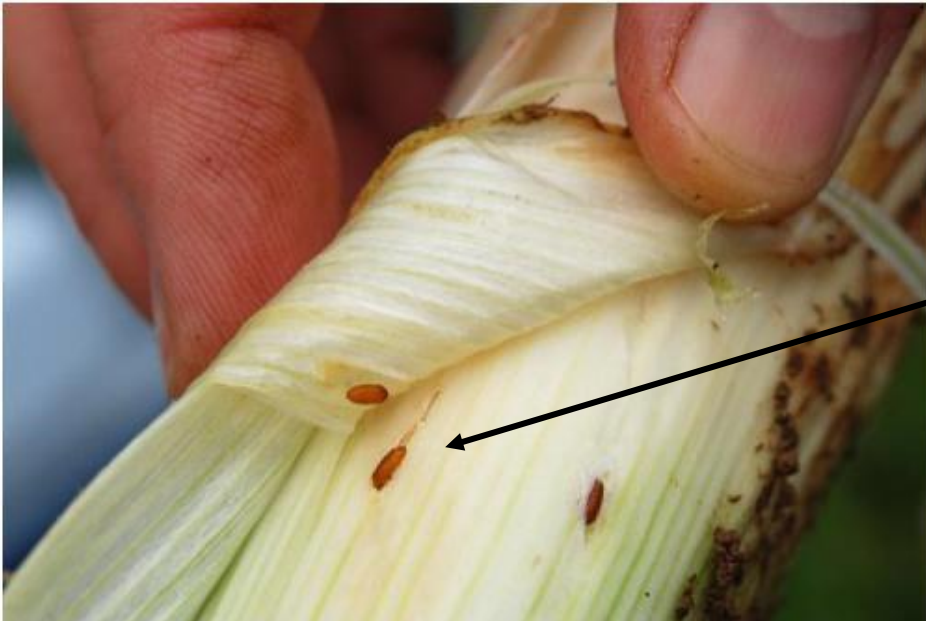
1. Row covers April to early May (1st generation) and late Aug. through late Sept. (2nd generation)
2. Spinosad or neem



Photo credit: Christa Carignan



Larva-
1/3 in.



Pupae

Photos: L. Donovall, USDA-APHIS,
S. Spichiger, PA Dept. of Ag

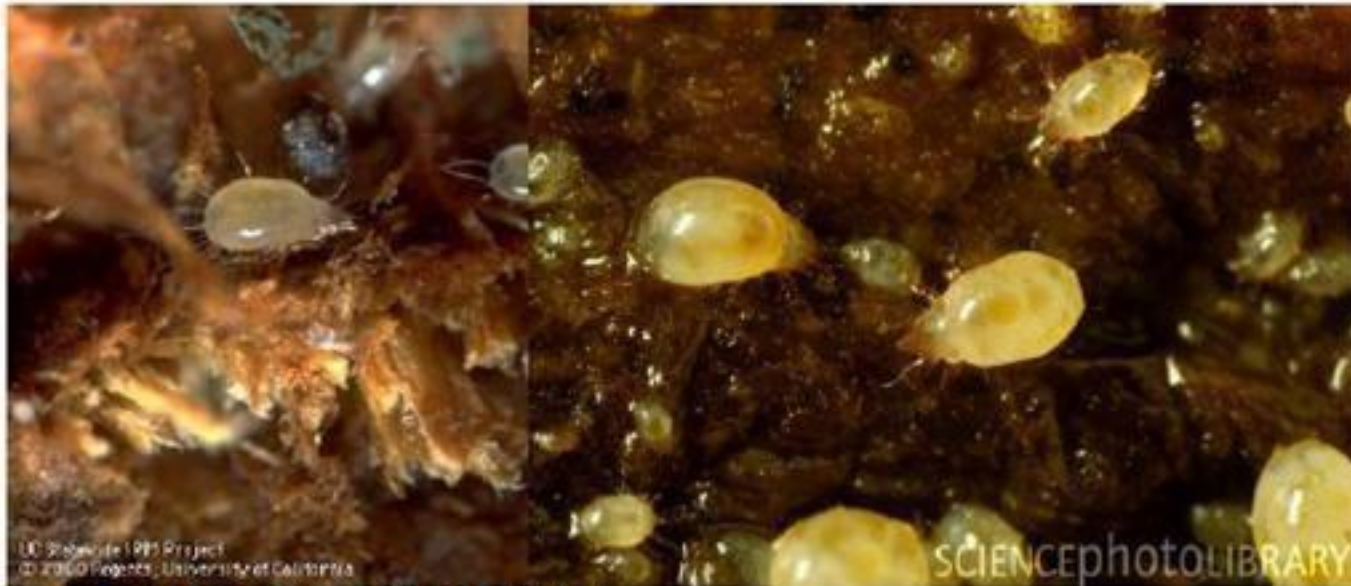


Fig. 1 Garlic bulb mites greatly magnified

Garlic bulb mites

- Buy clean seed stock
- Rotate garlic crops
- Remove all plant residue

Imported cabbageworm



Photo: Whitney Cranshaw, Colorado State University,
Bugwood.org



Cotesia glomerata- parasitoid



Life cycle of *Cotesia glomerata*, a braconid parasitoid of imported cabbageworm.

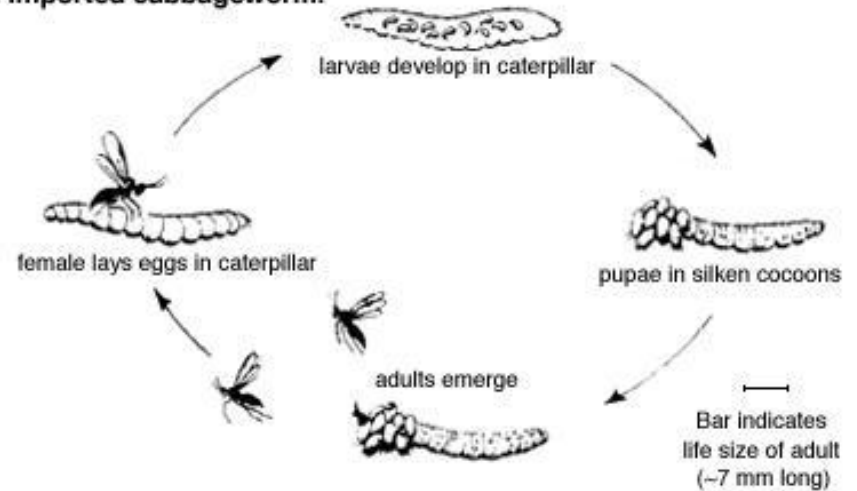


Photo and illustration: Cornell University
<https://biocontrol.entomology.cornell.edu/index.php>

Floating row cover extends growing season and protects crops



“Micro mesh” protects crops without temperature increase





Colorado
potato beetle

Mexican bean beetle- “skeletonizer”







Destructive harvest

- Pull up infested plants
- Harvest beans
- Stuff plants in big plastic trash bags
- Leave in sun for two weeks to break the lifecycle

Spotted cucumber beetle

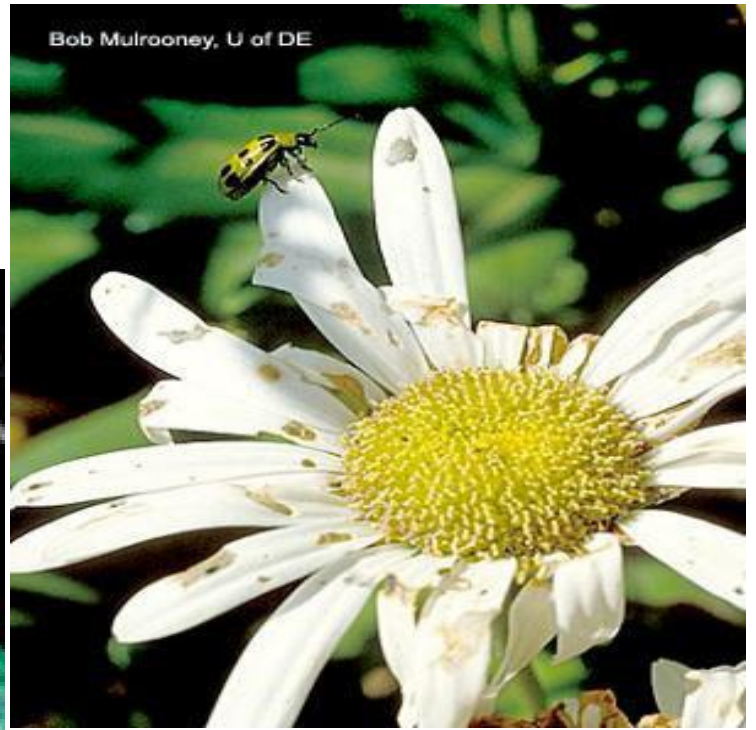
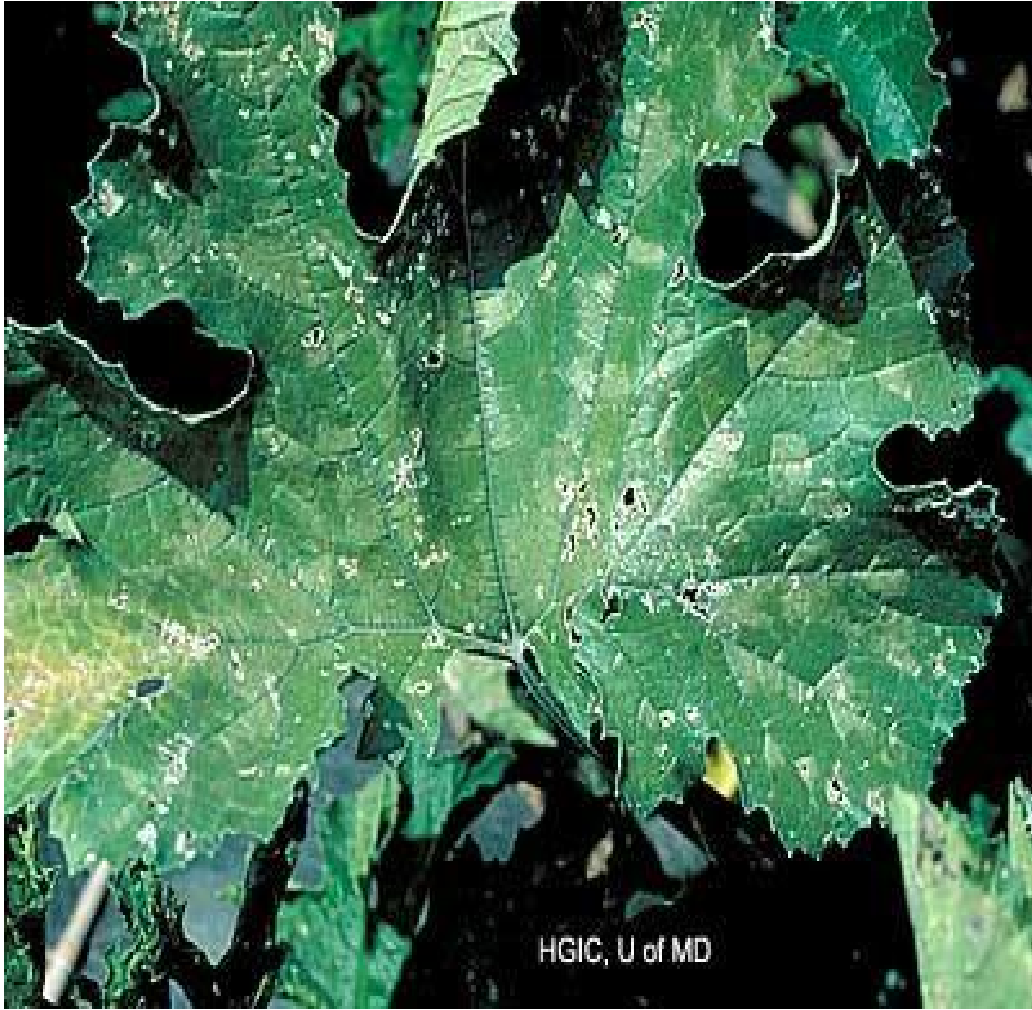


Striped cucumber beetle



Pink spotted lady beetle





Bacterial wilt disease



bacterial ooze

Harlequin bug eggs and nymphs



Swede Midge: Now in Pennsylvania

Another invasive species, the swede midge, has made its way to Pennsylvania. Swede midge is a tiny, 1/16 inch long fly that can be a serious pest of Brassica crops, also known as cole crops, and weeds.

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NEWS | UPDATED: JULY 22, 2020



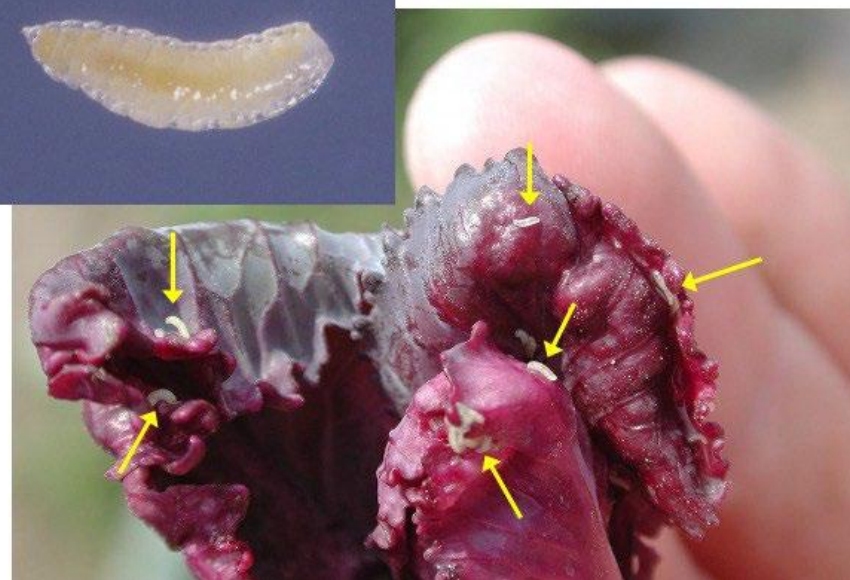
Brown corky scarring is not limited to the growing points and leaf petioles, but can also cause damage in the heads of cauliflower. Image: Cornell University

Native to Europe and parts of Asia, this pest was confirmed in New York about 20 years ago and has spread to additional states and Canada. This midge belongs to a group of insects that are known to be host-plant specialists, often causing galls or other induced plant growth patterns. The swede midge fits this pattern, being tightly connected to a plant family, and larval feeding induces changes in plant physiology, resulting in various forms of distorted growth.

We discovered swede midge by responding to a farmer's problem in broccoli on July 16, 2020, in Bradford County. To the best of



- All Brassica family plants
- Multiple generations; eggs laid inside buds
- Maggot feeding causes scarring, distorted growth, small heads
- Keep an eye out for this pest



Squash bug

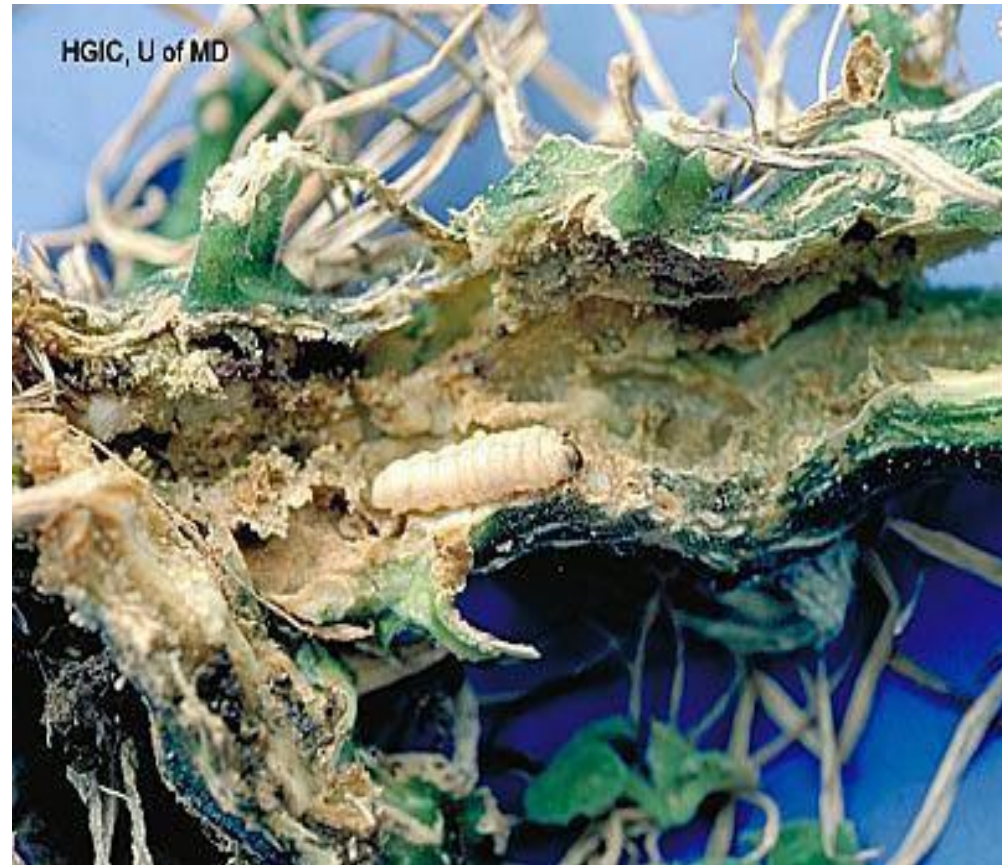


Eggs and immatures





Squash vine borer





Solutions to poor summer squash pollination:

- Proper growing conditions/plant care
- Patience (female flowers develop later)
- Hand pollination
- Parthenocarpic cultivars
- Multiple plantings
- Plant for pollinators
- Reduce/eliminate insecticides



Choanephora rot on squash



Manage the major fungal leaf spot diseases of tomato

- Space plants at least 2 ft. apart
- Remove lower leaf branches and excess suckers
- Water at plant base
- Good garden sanitation
- Fixed copper fungicides
- Resistant cultivars



Early blight



Septoria leaf spot

Excellent, updated list of disease-resistant cultivars and seed sources:



Cornell University
College of Agriculture & Life Sciences

Search:

This Site Cornell

Cornell Vegetables

HOME ABOUT CROPS SOIL PEST MANAGEMENT FOOD SAFETY BUSINESS NEWS



Disease Resistant Vegetable Varieties

- Beans
- Beets
- Broccoli
- Cabbage
- Carrots
- Corn (sweet)
- Cucurbits (cucumbers, melons, pumpkins, squash)
Cucurbit variety evaluations: downy mildew (cucumbers, LIHREC) | powdery mildew (cantaloupe, pumpkin, squash LIHREC)
Article: Cucumber and Cantaloupe Varieties Resistant to Downy Mildew
- Eggplant
- Leeks
- Lettuce
- Onion
- Peas
- Peppers
Article: Pepper Varieties Resistant to Phytophthora Blight and Bacterial Leaf Spot
- Spinach
- Tomato
Tomato varieties with multiple disease resistance from Cornell
Late blight resistant tomato variety evaluations

Prefer to view disease-resistant variety information in spreadsheets? Download disease-resistant variety spreadsheets from this Box folder.

Need Help?

- Find your local Cornell Cooperative Extension office
- Cornell Cooperative Extension Regional Commercial Vegetable Programs
- NYS Integrated Pest Management Program - Vegetables

Subscribe by Email

Receive Cornell Vegetable news updates

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Late leaf rust

Symptoms on leaves and fruits of primocane-bearing raspberry



Apple Disease - Marssonina Blotch

Marssonina blotch, caused by *Marssonina caronaria*, is a foliar disease first identified in Pennsylvania in September 2017.

[+ Save For Later](#) [Print](#)

ARTICLES | UPDATED: NOVEMBER 12, 2018



Leaf infected with Marssonina. Photo: K. Peter, Penn State

Marssonina blotch is controlled easily with fungicides; however, excessive rainfall may cause lapses in control. Marssonina blotch is found on leaves and fruit of apple. The disease is widely distributed and has been reported in North America, Europe, and Asia. Most recently, it was found in Pennsylvania in 2017. The disease can cause severe defoliation. Conventional fungicides such as captan, easily control this disease therefore, it is considered a minor pathogen in Pennsylvania. However, during a season where a lot of rain has fallen, trees may not be protected.

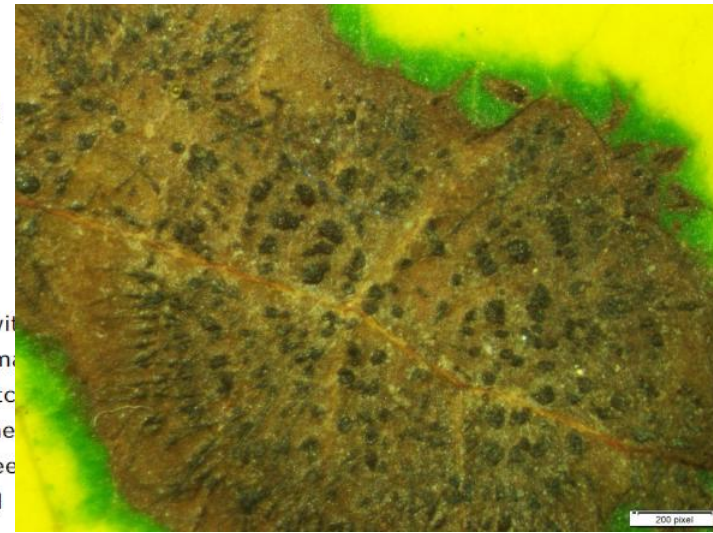


Photo: NCSU So. Appalachian Apples

Polycyclic fungal disease that produces symptoms similar to apple scab

Widespread in East Coast apple orchards



PHOTO BY AĆMOVIĆ S. G., 2020

And now for some
live samples!

