

Links Shared from Ask A Master Gardener Plant Clinic Training
September 2020

- [HGIC YouTube Channel](#)
- [UME MG Continuing Ed Page](#)
- [UME MG Webinars and resources page](#)
- Recording of the presentation, PDFs of slides, and additional resources will be available [here](#)
- [HGIC Caterpillars Page](#)
- [HGIC Bagworms](#)
- [HGIC Spider Mites](#)
- [HGIC Soft Scales](#)
- Submit your questions to [Ask an Expert](#)
- If you see spotted lanternfly, inform the Maryland Department of Agriculture at (410) 841-5920 or DontBug.MD@maryland.gov as soon as possible (please attach photos if sending an email)
- [Weed ID HGIC](#)
- [Lawn Conditions that Lead to Weeds](#)
- [HGIC Mowing Height Recommendations](#)
- [HGIC info on lawns](#)
- [HGIC Root Rots](#)
- [HGIC Smooth Patch Oak](#)
- [HGIC Rose Rosette](#)
- [HGIC Shrub Diseases](#)
- [Mt Cuba Center](#)
- [HGIC Brown Patch Lawns](#)
- [HGIC Burls](#)
- [HGIC Sudden Oak Death](#)
- [HGIC Southern Blight](#)
- [HGIC Late Blight Tomatoes/ Potatoes](#)
- [HGIC IPM web pages](#)- boxwood, dogwood, flowering fruit trees, azaleas and rhododendrons
- [Asian longhorned tick](#)
- [Periodical cicadas](#)
- [Spotted lanternfly](#)
- [Spotted Lanternfly Waterbottle Challenge in Cecil County](#)
- [HGIC Soil problems](#)
- [HGIC Soil basics](#)
- [HGIC Soil health](#)
- [Black knot on plum](#)
- [HGIC Climate Change and Gardening](#)
- [UNH factsheet on blossom-end rot](#)
- [Cornell study on squash parthenocarpy](#)
- [Bulb Mites](#)
- [Swede midge](#)

Links Shared from Ask A Master Gardener Plant Clinic Training
September 2020

- Asian jumping worms:
 - [Cornell Extension](#)
 - [MD Grows blog](#)
 - <http://mdinvasives.org/iotm/nov-2019/>
- [UME- Vegetable & Fruit News](#)
- [UDEL Weekly Crop Update](#)
- [Rutgers- Plant & Pest Advisories](#)
- [Penn State- Fruit and Vegetable Updates](#)
- [UMASS- Vegetable Notes](#)
- Please evaluate Jon's presentation: <https://go.umd.edu/ENRTEACH>
 - select the presenter (Jon Traunfeld)
 - select the date (January 27th)
 - select the program topic (Master Gardener)
 - answer 5 questions
 - press the blue submit button
- [HGIC Figs](#)

Vegetable/Fruit Update

Plant Clinic Continuing Education

September 18, 2020

Jon Traunfeld; jont@umd.edu

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ASK A MASTER GARDENER
PLANT CLINIC

A MASTER GARDENER PROGRAM

HGIC website updates

- IPM Series fact sheets becoming web pages
- Insects:
 - Spotted Lanternfly
 - Asian longhorn tick
 - Periodical cicadas (2021 is big year for Brood X)
- New Soils / Fertilizer pages
- Revamping vegetable and fruit pages
- “Ask an Expert” soon to be “Ask Extension”

Climate change is having major impacts on farming and gardening



Extension in your community

Want to connect with Extension on a local level? [Find your local Extension office](#)

[How to handle ash on fruits and vegetables](#)

Fruits and vegetables in the garden that have been showered with ash from wildfires should be safe to consume, according to Oregon State University Extension Service experts. [See what you can do to make sure.](#)



Professional & Continuing Education

Trainings, workshops and events coming up this month: [See upcoming programs](#)

Home Ignition Zone: Protect from Wildfire

Protect your home

Wildfire is inevitable — learn what you need to know to prepare your home and property. Handy

Permaculture Design for Climate Resilience


Design your landscape

As the climate shifts around the globe, it is increasingly important for the permaculture designer to

Weather in Maryland- 2020

- Warmest July on record (Baltimore had 25 days above 90° F.)
- 3rd warmest January-July period
- 4th wettest August

Climate change and garden problems

- Late spring frosts are more damaging following warm temps that push bud development
 - High day and evening temps interfere with flower and fruit set
 - Accelerated ripening/maturing; fruits soften and sunburn
 - Whitefly becoming perennial pest
 - Southern pests visit more often (e.g., pickleworm)
- 

Pennsylvania Insect Alert for September 2, 2020: Yellow-Striped Armyworm Outbreak

An outbreak of yellow-striped armyworm has occurred in potatoes along the Susquehanna River, north of Harrisburg. High populations have defoliated fields up to 30 acres in size.

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

[NEWS](#) | UPDATED: SEPTEMBER 3, 2020



Yellow-striped armyworm on potato. Photo: Bob Leiby, Penn State Extension, retired.

The yellow-striped armyworm, *Spodoptera ornithogalli*, overwinters in southern areas and migrate northward each year. Eggs, larva, and adults are killed by freezing temperatures. Pupa can withstand colder temperatures, and this species overwinters in North Carolina and Kentucky. In warm winters, migrants may reach our area earlier and complete more generations. **It is not new to have yellow-striped armyworm (YSAW) in our area.** What is new is to see it reaching high enough numbers to be considered a pest. The geographic distribution of this species reaching pest status has historically been limited to southern states, the Caribbean, Mexico, and

RELATED P



Yellow-striped armyworm



Heat and reflected solar radiation stress



Anthracnose



Internal blossom-end rot



What caused this symptom?



Stink bug feeding injury



Cucurbitaceae- many questions from gardeners every year

1. Large number of insect pest and disease issues and abiotic problems
2. Pollination and fruit set issues

Tips:

“Grow it right”

Disease-resistant and parthenocarpic cultivars

Plant mid-June

Destructive harvest can help break pest cycles



Bean roots

Nodules produced in response to *Rhizobia* spp.
(plant-microbe symbiosis)

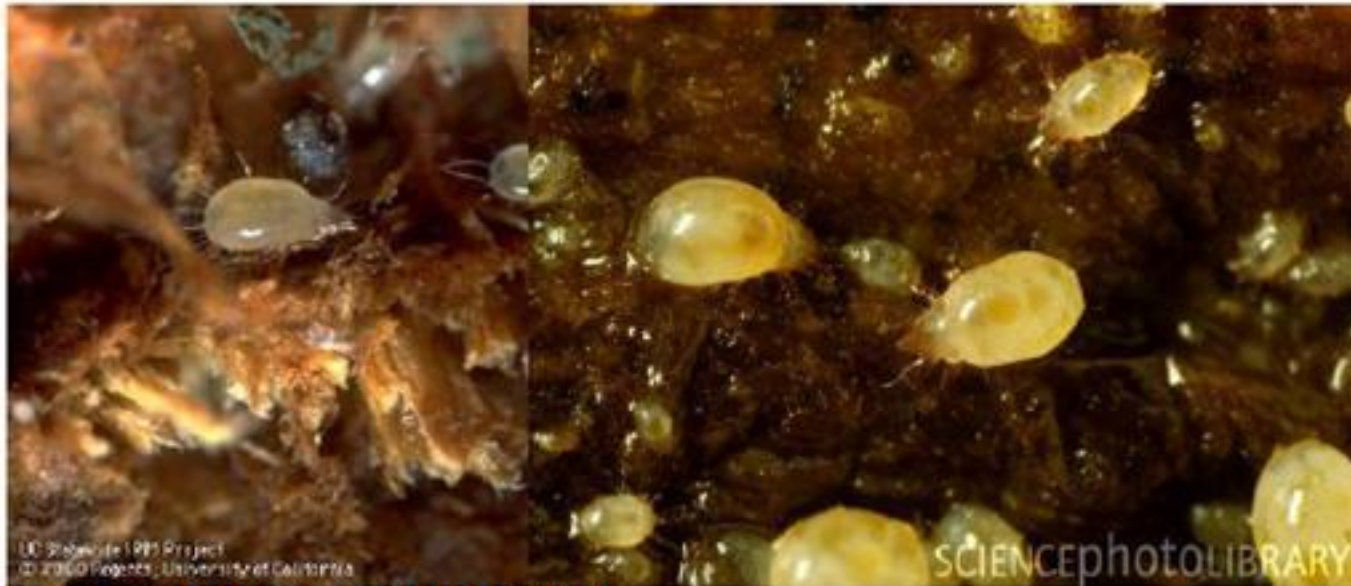


What caused the swelling, or “galling”?



Injury to tomato from manure contaminated with phenoxy herbicide residue





UC Statewide IPM Project
© 2000 Regents, University of California

SCIENCEPHOTOLIBRARY

Fig. 1 Garlic bulb mites greatly magnified

- Buy clean seed stock
- Rotate garlic crops
- Remove all plant residue
- Search “bulb mites” on UME website

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.

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

NEWS | UPDATED: JULY 22, 2020



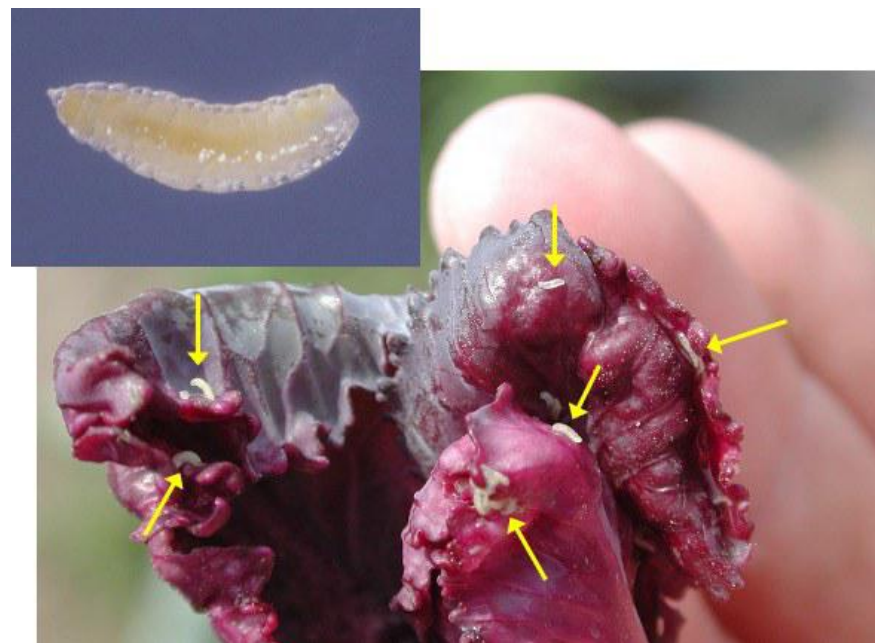
Brown corky scarring is not limited to the growing points and leaf petioles, but can also cause damage in the heads of cauliflower. Image: Cornell University

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
- Maggot feeding causes scarring, distorted growth, small heads
- Keep an eye out for this pest



Allium leafminer

Management:

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

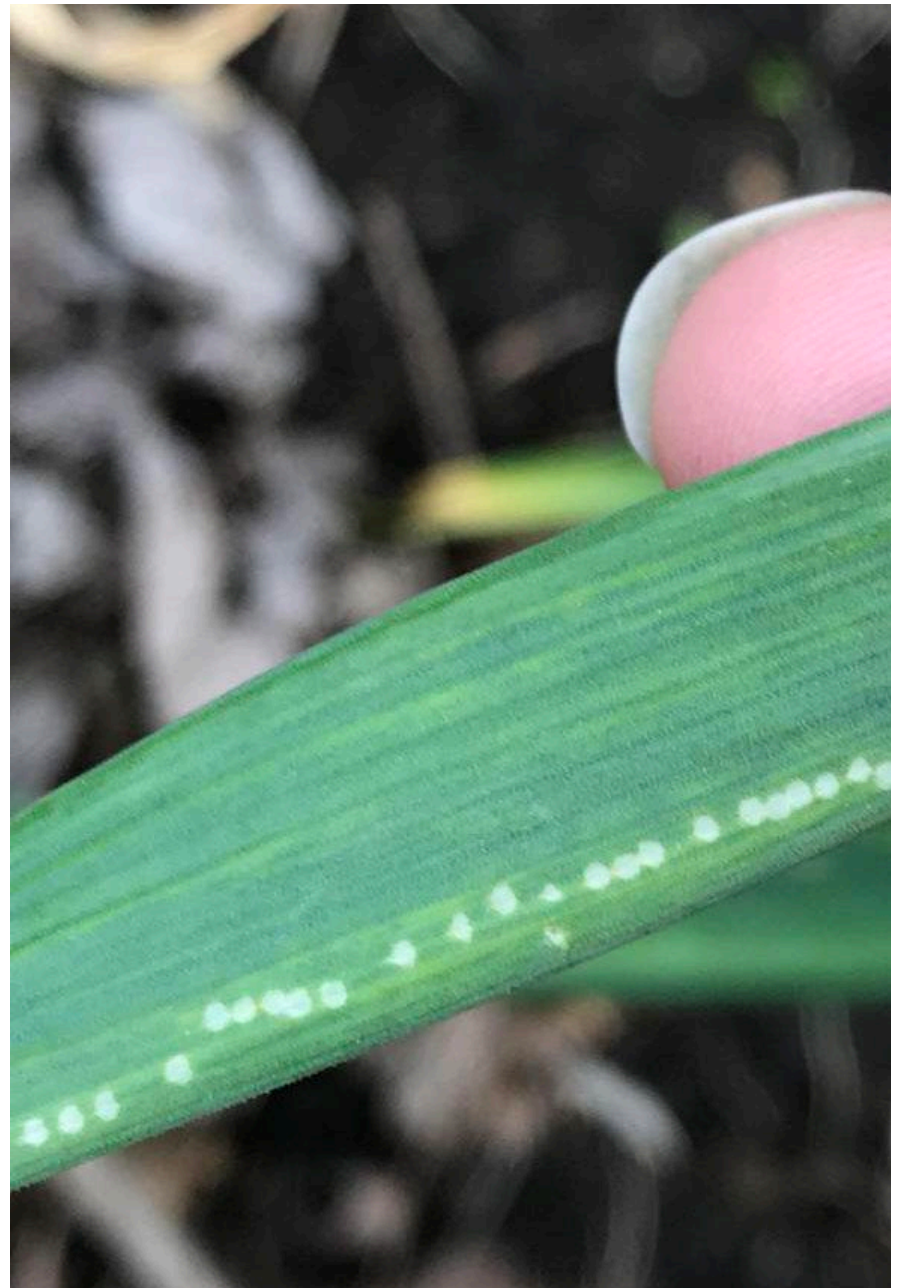


Photo credit: Christa Carignan

Asian jumping worm reports are up





Fig trees not fruiting / fruits are small and not ripening

1. winter-kill of above-ground wood (protect plant overwinter)
2. excessive shade (move tree; thin interior branches)
3. wrong cultivar for region (plant recommended cultivars)

Best veg/fruit Extension newsletters (for commercial audience)

- UME- Vegetable & Fruit News
- UDEL- Weekly Crop Update
- Rutgers- Plant & Pest Advisories
- Penn State- Fruit and Vegetable News/Updates
- UMASS- Vegetable Notes

And check out UME's "MD Vegetables" website
(Jerry Brust, Vegetable IPM Specialist)

Thanks for
participating!

Questions?

A photograph of a garden bed. The bed is filled with straw mulch and has a wooden border. A metal wire cage stands in the bed, with green plants growing inside. A red sign is placed in the bed, leaning against the cage. The sign has white text that reads "To Plant a Garden is to" followed by a green flower icon, then "Believe" in large blue cursive, and "in tomorrow" in white. The background shows more garden beds and a white structure.

To Plant a Garden
is to 
Believe
in tomorrow



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2020 Fall Insect Update

Emily Zobel

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Senior Agent Associate

University of Maryland Extension

Dorchester County

General Tips

- As you install plant material this fall in the landscape or nursery, please look closely for insect pest
- Always read the label and follow the directions when using any chemical, even organic, in the home or garden.
 - Google name with “Label” to find a pdf copy
- Proper fertilization and irrigation will promote a healthy plant.
 - Do not over fertilize. Excessive fertilizer can increase pest populations, injure foliage and roots and cause other problems.

Hibiscus Sawfly

(Atomacera decepta)

- Creates large holes in the foliage
- Active: May until the first frost
- Feed in groups on the undersides of leaves
- Prune out damaged leaves
- Spinosad - Read label and follow the directions!



Fall Webworms

(*Hyphantria cunea*)

- Host: Mulberry, walnut, hickory, elm, sweet gum, oak, linden,
- Created “nest” out of webbing
- Control not generally not needed
 - Prune out the webs
 - Open the web



Mimosa Webworm

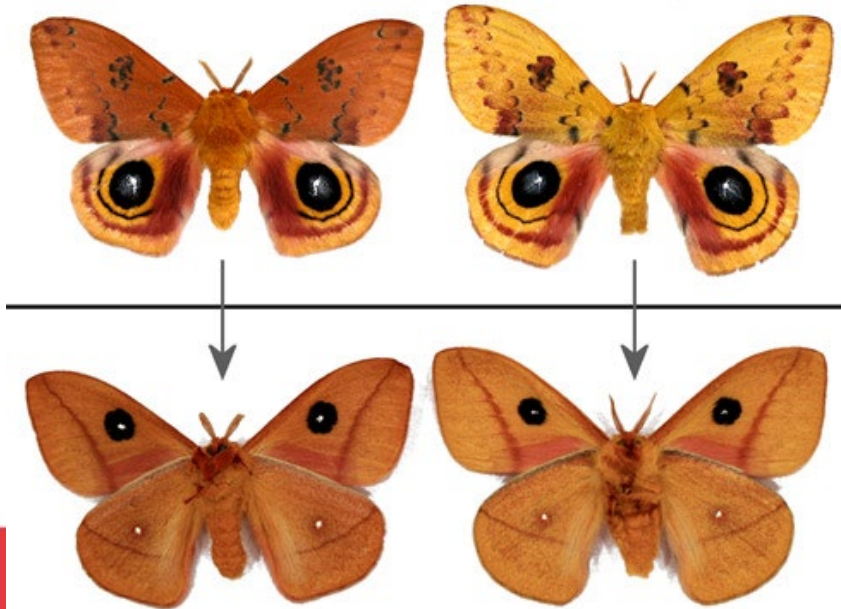
- Spin a web around leaflets and fees
 - Mimosa and honeyloucust tree
- 2 generations
 - Mid-June
 - August- September
- Control – Spring population
 - Rake up leaf and other debris
 - Prune
 - Open up webbing



Stinging Caterpillars

- Puss Caterpillars (Southern flannel moth)
- Saddleback Caterpillar
- Io moth caterpillar





Banded Ash Clearwing

(Podosesia aureocincta)

- Not to be confused with the Banded Ash borer (beetle)
- Host plant: Ash tree
- Adult emerge in early fall
 - Mate, female lay eggs on bark of Ash trees
- Die back, holes, frass and pupal skin
- Control – Difficult
 - Reducing plant stress – trees in good health are less susceptible



Bagworms

(Thyridopteryx ephemeraeformis)

- Pest on Conifers
- Males are flying
- Hand remove bag and destroy
 - Females and eggs
- Eggs will hatch and larva will balloon (May)



Spruce Spider Mite

(Oligonychus ununguis)

- Conifers pest
- Tiny yellow stipples on needles. The needles turn yellow, and then brown
 - Webbing
- Tap branches over white paper and look for the dark mites
- Control
 - Water
 - Horticultural oil (Not on Blue Spruce)



Fall Scale Control

- Prune out heavy infested areas
- Wash the reachable branches with a mild soap solution and a soft scrubbing brush
- When active manage crawler with horticultural oil or Insect Growth Regulator
- Dormant oils : Applied in fall and then again in Feb-March to kill the overwintering nymphs
- Spring time: soil drenches with systemic insecticides

READ and FOLLOW ALL LABEL INSTRUCTIONS

Tuliptree Scale

(*Toumeyella liriodendri*)

- Pest of yellow poplar, or tuliptree, magnolia, and linden
- 6-7 mm in diameter, oval, convex, and have a distinct rim, grayish green or pinkish orange
- Crawlers – Dark red or gray,
 - Late Aug – Early Sept



5520231

Tuliptree scale crawlers on female covers



UMD-IPMnet

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Solutions in your community

White Prunicola Scale

(Pseudaulalacaspis prunicola)

- *Prunus* species, boxwood, cherry laurel, red twig dogwood, euonymus, magnolia, privet
- Adults- round, white with yellow-brown dot
- Crawler- pink
- 3 generations
 - May, mid-July to mid-August, and September



Magnolia Scale

(*Neolecanium cornuparum*)

- Magnolia (star and saucer) and Virginia creeper.
 - 1-2 year twigs
- Adults: ½ inch, Shiny tan-brown and smooth, Covered with a white mealy wax
- Crawlers – Dark color
- One generation per year
 - Eggs that hatch in late August



Crapemyrtle Bark Scale

(Acanthococcus (=Eriococcus) lagerstroemiae)

- Found in Texas in 2004
- Native to Asia
- Found in Fredrick County, Carroll County
- Adults – 2mm, white -gray
- Crawlers – pink
- Host plants: Crapemyrtle, apple, persimmon, edible fig, boxwood, American beautyberry, privet, and raspberries



Crapemyrtle Bark Scale

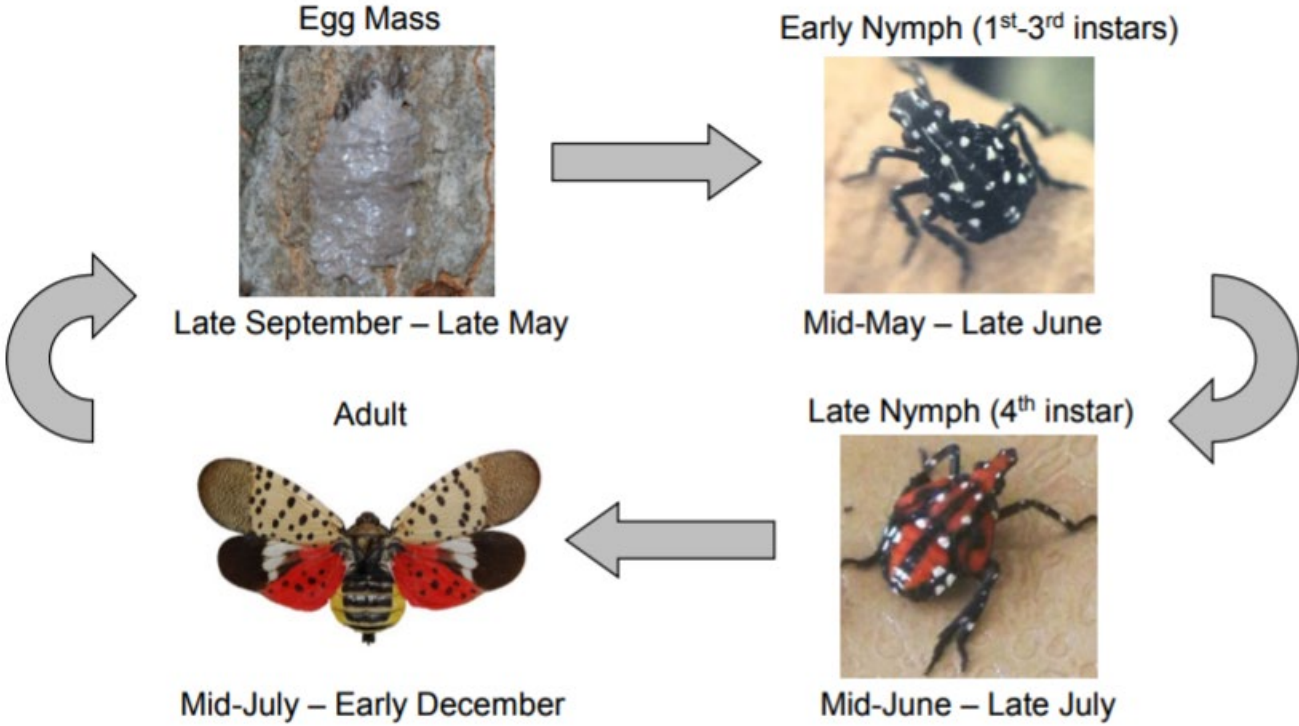
(*Acanthococcus* (=Eriococcus) *lagerstroemiae*)

- Truck, branches and twigs
 - aggregate on the underside, away from sun exposure
 - Honey dew & sooty mold
- Check all new plants before planting
- Please report if you find it



Spotted Lanternfly

(Lycorma delicatula)

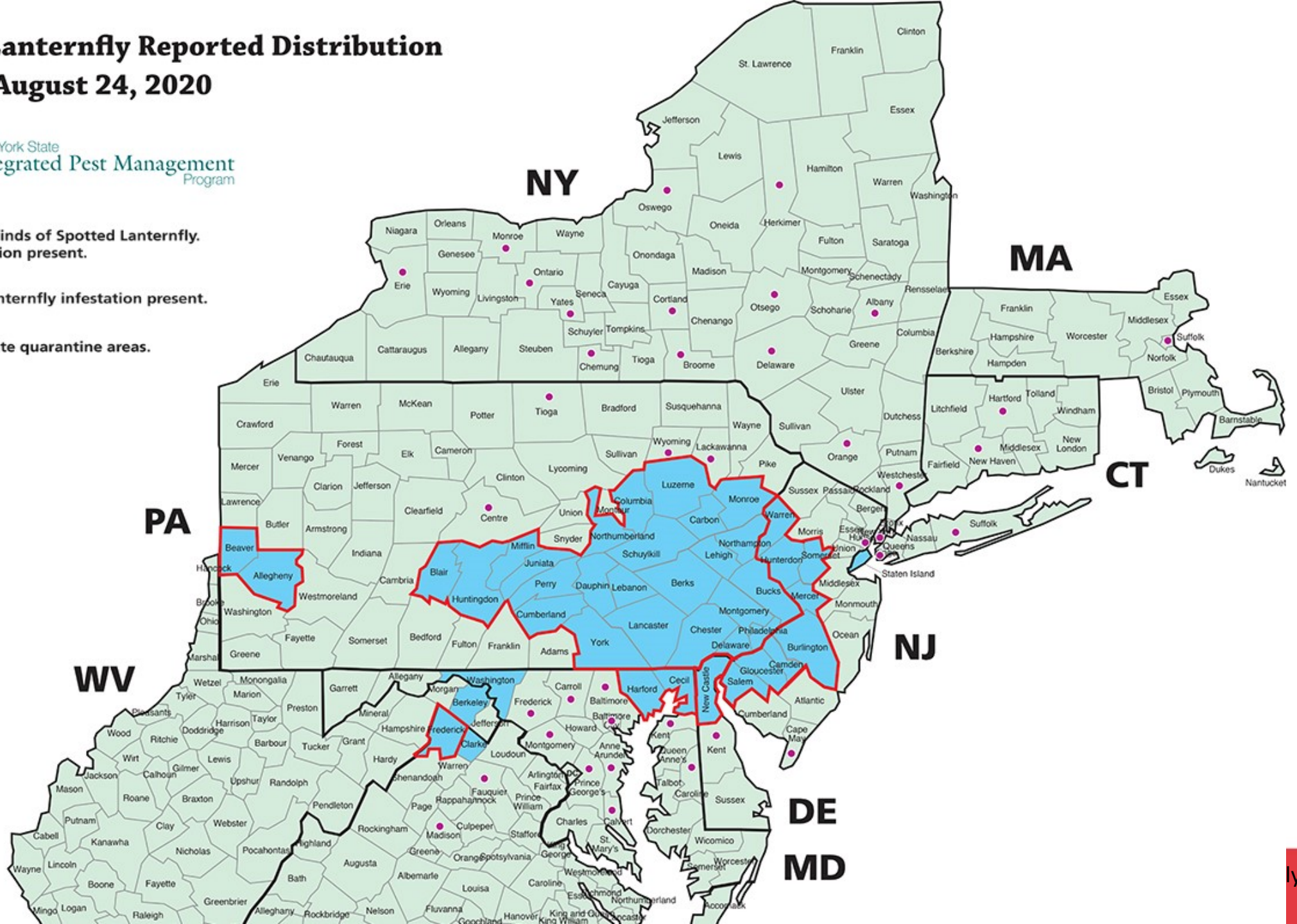


Spotted Lanternfly Reported Distribution

Updated August 24, 2020



- Individual finds of Spotted Lanternfly. No infestation present.
- Spotted Lanternfly infestation present.
- Internal state quarantine areas.



Parasitized Hornworm



Orb Weaver Spider



Black Swallowtails Caterpillar





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



Weed Management Tips

Kurt Vollmer

Extension Weed Management Specialist



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Before we begin...

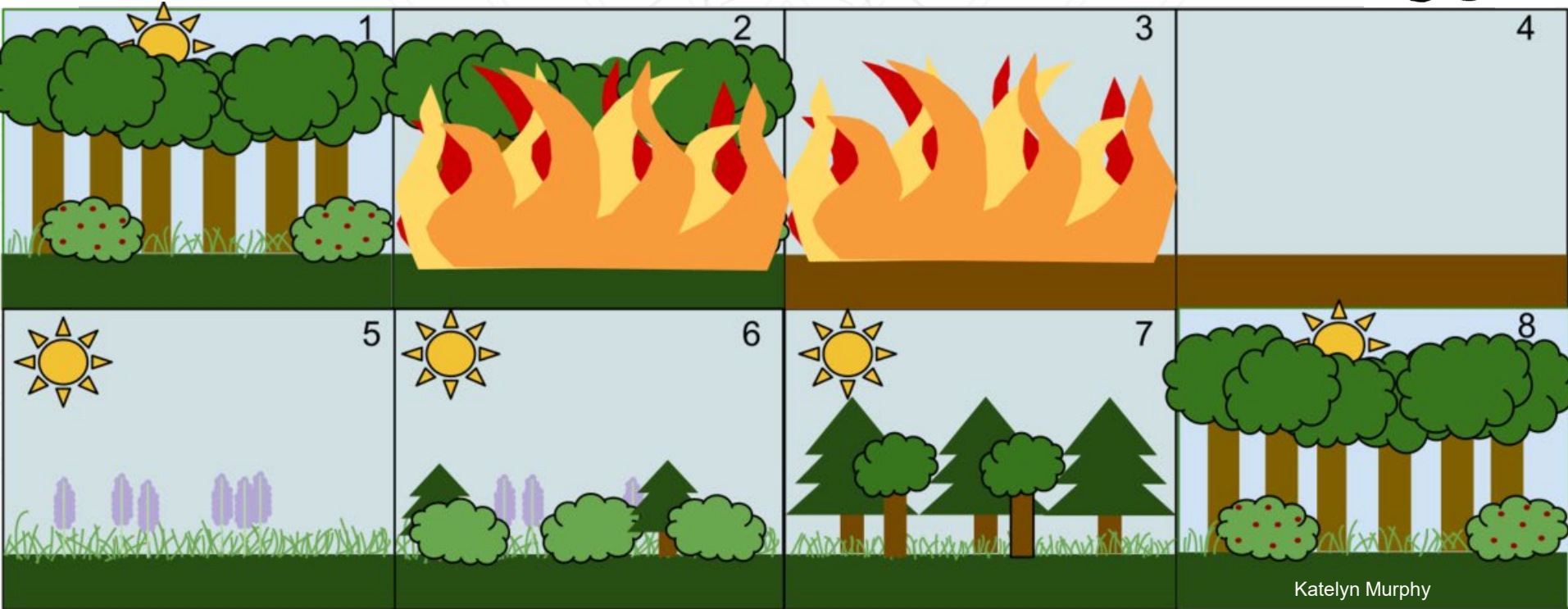
- How do we define “weed”
 - ~ a plant that is unwanted or out of place
 - ~ 250,000 plant species
 - ~ 8,000 behave as weeds
 - ~ 200 to 250 are major problems in worldwide cropping systems

Characteristics of Weeds

- Abundant seed production
 - 10,000-100,000 seeds per plant
- Rapid population establishment
- Seed dormancy/long term survival of buried seed
- Adaptation for spread
- Vegetative reproductive structures
- Ability to occupy disturbed sites



Weeds are pioneers!



Katelyn Murphy

Weeds are Symptoms!



- Weeds grow in gaps!
- Simply removing a weed may not solve the problem.

Weeds are Symptoms!



Low pH



red sorrel

High pH



broadleaf plantain

Weeds are Symptoms!



Soil Compaction



goosegrass



pineappleweed

Weeds are Symptoms!



Poor Drainage



yellow nutsedge



Virginia buttonweed

Weeds are Symptoms!



Poor Fertility



white clover

Weeds are Symptoms!



Shade



ground ivy



violet

Weeds are Symptoms!



Improper Mowing Height/Frequency



crabgrass



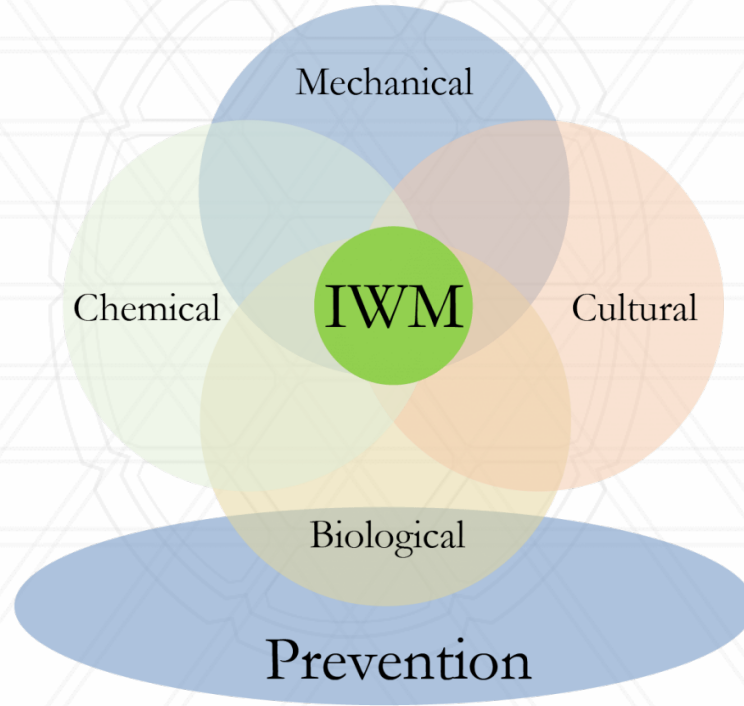
annual bluegrass

Ask?

- What weed(s) need to be controlled?
- How much effort am I willing to spend to correct the problem?



Basic Weed Management Tactics



Prevention



- Start clean (weed free inputs)
- Identification
 - grass vs broadleaf
 - annual vs biennial vs perennial

Cultural

- A healthy garden/ lawn is the best weed control
 - irrigation
 - fertility
- Mulch
 - shade out emerging seedlings



<http://1.bp.blogspot.com/-ui8-0RUrk6s/TpO4A0AokEI/AAAAAAAAACAw/NkdJ50jzaJc/s1600/lawn-care.jpg>

Mechanical

- Mowing
- Chopping/cutting
- Hoeing
- Hand-pulling



Chemical (i.e. Herbicides)



Synthetic

- PRE
 - Balan, Dacthal, Pendulum
- POST
 - 2,4-D, dicamba, glyphosate
 - contact and systemic
- Selectivity

Organic

- PRE
 - corn gluten meal
- POST
 - vinegar, botanical oils
 - contact only
- Non-selective

Chemical (i.e. Herbicides)



Contact

- Only kills what it touches
- Better for control of small weeds
- Coverage is key!
- Not very effective against perennial weeds

Systemic

- Translocated
- Will control larger weeds
 - spraying smaller weeds will provide more effective control
- Effective against perennial weeds

READ THE LABEL!

- Know your active ingredients
- Know your lawn
- Know your application rates and timings



Active Ingredient:

2,4-D, dimethylamine salt	6.42%
Quinclorac	2.13%
Dicamba, dimethylamine salt	0.60%

Other Ingredients: 90.85%

TOTAL: 100.00%

This Product Contains:

- 0.456 lb 2,4-dichlorophenoxyacetic acid equivalent per gallon or 5.33%
- 0.182 lb 3,7-dichloro-8-quinolinecarboxylic acid per gallon or 2.13%
- 0.043 lb 3,6-dichloro-o-anisic acid equivalent per gallon or 0.50%
Isomer Specific By AOAC Methods.

Know the Weed's Lifecycle

- Annuals – live for 1 growing season, fibrous root system (e.g. crabgrass, spotted spurge)
- Biennials – form basal rosette the first year, mature and produce flowers the second year (e.g. musk thistle, wild carrot)
- Perennials – live multiple years, reproduce from taproots, rhizomes, tubers, etc. (e.g. dandelion, nutsedge)

Herbicide Application Timing - Annuals

- Spray prior to flowering/seeding
- Spray seedlings in the spring or summer
- Spray again before weeds reach greater than 4 in.

Herbicide Application Timing - Biennials

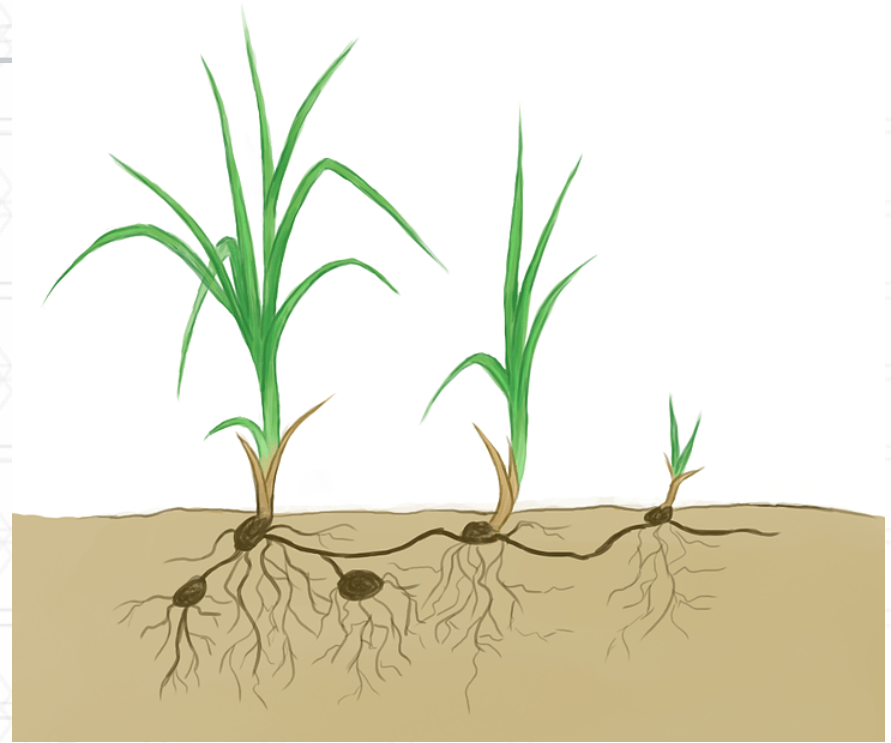
- Spray seedlings – late summer or fall
- Spray rosette – fall or early spring
- Once plants begin to bolt, control is reduced

Herbicide Application Timing - Perennials

- Spray at the early bud stage or in the fall
- Herbicide translocated to taproot

Yellow Nutsedge

- Perennial- nutlets, rhizomes
- Maintain a dense turf –don't mow too short
- Remove entire plant from landscape beds
- Herbicide applications in spring/early summer
 - halosulfuron (Sedgehammer®)
 - sulfentrazone (Ortho Nutsedge Killer for Lawns®)



Broadleaf plantain

- Perennial
- Maintain a dense turf stand—
aerate soil and improve drainage
- Eliminate seeds prior to
flowering—tolerates close
mowing
- Remove entire plant
- Herbicide applications in early
spring or early fall
 - PRE: isoxaben (Gallery®)
 - POST: 2,4-D, MCCP, triclopyr



Spotted spurge

- Summer annual
- Opportunistic in open spaces
 - maintain a dense turf stand
 - pull from landscape beds
- Herbicide applications in early summer
 - 2,4-D, dicamba, triclopyr, spot treat with non-selective herbicides



Clover

- Perennial
- Increase fertility
- Increase mowing height
- POST herbicide applications
 - dicamba, clopyralid, fluroxypyr, and quinclorac



Common lespedeza

- Annual
- Maintain a dense turf stand
 - fertility
- Post herbicide applications
 - 2,4-D, dicamba, triclopyr, MCPA



Violets

- Annual or perennial
- Tolerates shade and moist soils
- Fall herbicide applications
 - sequential applications of triclopyr + 2,4-D and/or dicamba



Ground Ivy

- Perennial
- Tolerates shade, wet soils, and poor fertility
- Fall herbicide applications
 - triclopyr (+2,4-D , + dicamba)
 - glyphosate (spot spray)
 - borax



Dandelion

- Perennial
- Increase mowing height
- Fall herbicide applications
 - 2,4-D, dicamba, triclopyr, glyphosate



Crabgrass, foxtails, goosegrass

- Annuals
- Increase mowing height (2 in. or greater)
- Aerate, proper irrigation and fertilization
- PRE herbicide applications
 - Spring (10-14 days prior to the earliest expected germination)
 - benfen, oxadiazon, pendimethalin, corn gluten meal
- POST Herbicide applications
 - quinclorac, fenoxaprop, DSMA, MSMA, glyphosate (spot-spray)



Robert Vidéki

5396608

foxtail



crabgrass



goosegrass

Japanese stiltgrass

- Annual
- Mulch/dense lawn
- Hoeing/pulling before seed drop
- Mow just before seed set
- PRE herbicide applications
 - trifluralin, pendimethalin, prodamine
- POST herbicide applications
 - fenoxaprop



Vines: poison ivy, etc.

- Physical: pulling, cutting vines
- Systemic herbicide applications
 - glyphosate, triclopyr
- Larger vines – cut stump
 - triclopyr



Pigweeds



Palmer amaranth



U. of Missouri

Smooth pigweed



Virginia copperleaf

Summary

- Know what needs to be managed
- Know where it needs to be managed
- Treat the disease not just the symptoms
- Read the Label!
- Happy Weeding!



Additional Materials

- Fall Lawn Care:
https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/430/430-520/SPES-223.pdf
- Spring and Summer Lawn Management Considerations for Cool-Season Turfgrasses:
https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/430/430-532/430-532_pdf.pdf
- Vegetable Garden Weed Management:
<https://cmg.extension.colostate.edu/wp-content/uploads/sites/59/2020/03/Vegetable-Garden-Weed-Management-2018-rev.pdf>



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Thank you!



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