

Wisconsin Horticulture Update Summary, June 27, 2014

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WI WEATHER REVIEW

Showery weather persisted, slowing the final stages of corn and soybean planting and causing localized flooding. Partly cloudy skies prevailed throughout the week and precipitation was scattered with isolated areas of heavy rain (0.5-1.5 inches) occurring primarily in the western and northern regions. Madison recorded eight successive days with measurable rain from June 16-23. Meanwhile, high temperatures were seasonable and ranged from the mid-60s near Lake Michigan to the upper 80s at inland locations. Lows were in the 40s to upper 60s. The excessive precipitation prevented planting of some remaining fields in the northern counties, but this week's heat and humidity spurred crop growth statewide. The most advanced corn has reached the eight-leaf (V-8) growth stage and soybeans are likely to enter the initial reproductive stages (R1) by the first week of July.

Growing Degree Days (GDD)

Growing degree days is an accumulation of maximum and minimum temperatures as directly related to insect and plant development. This week, as of June 27, in Wisconsin, the GDDmod 50 ranged from 425 to 1024: Appleton-742; Bayfield-425; Beloit-1024; Big Flats-865; Crandon-592; Crivitz-619; Cumberland-697; Eau Claire-829; Green Bay-660; Hancock-865; Hartford-774; Juneau-844; LaCrosse-964; Lone Rock-988; Madison-993; Medford-671; Milwaukee-713; Port Edwards-831; Racine-706; Sullivan-774; Waukesha-774; Wausau-699 (WI Pest Bulletin Volume 59 Number 8 June 19 2014). To determine the Degree Days of any city in Wisconsin, use the Degree Day calculator at

http://agwx.soils.wisc.edu/uwex_agwx/thermal_models/many_degree_days_for_date

The following phenological information gives a perspective on how GDD accumulation relates to some plant and insect development (<http://bygl.osu.edu/>): Vanhoutte spirea, full bloom, 406; euonymus scale (first generation), egg hatch, 406; black cherry, full bloom, 419; Miss Kim Manchurian lilac, first bloom, 422; locust leafminer, adult emergence, 437; doublefile viburnum, full bloom, 444; black locust, first bloom, 467; common ninebark, first bloom, 478; oystershell scale, egg hatch, 497; smokebush, first bloom, 501; catawba rhododendron, full bloom, 503; white fringe tree, full bloom, 517; arrowwood viburnum, first bloom, 534; American yellowwood, first bloom, 546; bronze birch borer, adult emergence, 547; multiflora rose, first bloom, 548; black locust, full bloom, 548; and emerald ash borer, adult emergence, 550. American yellowwood, full bloom, 599; arrowwood viburnum, full bloom, 621; multiflora rose, full bloom, 643; northern catalpa, first bloom, 675; black vine weevil, first leaf notching due to adult feeding, 677; Washington hawthorn, full bloom, 731; calico scale, egg hatch, 748; greater peach tree borer, adult emergence, 775; rhododendron borer, adult emergence, 815; northern catalpa, full bloom, 816; mountain laurel, full bloom, 822; dogwood borer, adult emergence, 830; oakleaf hydrangea, first bloom, 835; cottony maple scale, egg hatch, 851; panicle hydrangea, first bloom, 856; fall webworm, egg hatch (first generation), 867; mimosa webworm,

egg hatch (first generation), 874; fuzzy deutzia, full bloom, 884; winged euonymus scale, egg hatch, 892; spruce budscale, egg hatch, 894; winterberry holly, full bloom, 897; squash vine borer adult emergence, 900; panicked goldenraintree, first bloom, 924; June bride littleleaf linden, first bloom, 953; azalea bark scale, egg hatch, 957; Japanese beetle, adult emergence, 970; rosebay rhododendron, first bloom, 1,010; June bride littleleaf linden, full bloom, 1,115; bottlebrush buckeye, first bloom, 1,158; Ural falsespirea, first bloom, 1,170.

INTRODUCTION

Today's WHU host was Kenosha County Horticulture educator Barb Larson. Specialists were PDDC director Brian Hudelson and Interim Director of Insect Diagnostic Lab P.J. Leisch. The special guest this week is Tom German, Dept. of Virology/Entomology, plant virus expert. Discussion participants were representatives of the following counties: Brown (Vijai Pandian); Columbia (George); Kenosha (Barb);Milwaukee (Sharon);Pierce (Diana); Portage (Walt); Waukesha (Ann); Jackson (Trisha); Racine (Patti); Rock (Christy).

HORTS' SHORTS

This week, county agents reported once again that deciduous tree and woody ornamental problems dominated questions.

Pierce County: There has been lots of rain with standing water present in fields with possible nitrogen loss. Questions were received concerning weed and insect ID, as well as leaf galls. We could use some warmth and dryness.

Jackson: We are hearing about tree dieback. There was another 0.5 inch of rain this morning. Vegetable growers on sandy soils are happy with all the moisture, but on heavier soils the ground is flooding.

Brown County: There has been a decent amount rain. Tree and woody ornamental questions dominated, running the gamut from anthracnose and galls on both maple and ash, dieback on woody ornamentals, collapse after leafing out and blooming. Slug and sawfly damage has been observed.

Columbia County: Sunshine today. Good moisture and turf growth has been good. Questions were the normal things, including weed and insect questions.

Rock: The weather has been rainy. A report of a brown marmorated stink bug was made. The wild parsnip, and surprisingly brassicas, are in full bloom. There has also been a report of early blight on all tomatoes in the community garden and questions about EAB. We received many questions on tree dieback.

Portage: Apple blight dieback has been reported, and red barberry has stress induced collapsing. The yellow varieties do not appear to be as affected. We aren't sure if there is verticillium involved. A tomato sample was received that looked healthy except for a severely wilted shoot. Under the microscope, a white soft-bodied insect was seen moving around, but identification is unknown because it moved so fast it couldn't be photo-captured.

Waukesha: There has been a hodgepodge of questions, but many were for identification of weeds, insects, and plants. We are looking forward to a couple of warm, sunny days.

Milwaukee: We have reports of potato leaf hopper, box elder bugs, 4-lined plant bug, and an American painted lady caterpillar. There has been so much rain that the 6 inch rain gauge overflowed in the youth garden. We are expecting water and flooding problems with root rot and slugs, along with nitrogen loss. The days and nights have been cool; a couple of nights were 55^o F. We've had unusual weather patterns.

Racine: There have been questions about plant, weed, and insect identification. There haven't been too many insect issues, but we have seen flea beetles and asparagus beetles, but overall it hasn't been too busy for PHA's. The wet soil is causing some problems for vegetable gardens.

Kenosha: We have had similar issues as Racine and Kenosha, with many ID questions. We had a report about unflavorful, sour tasting strawberries that had planted on the east side of the house, which may be a weather rot that causes bitterness. There hasn't been enough sun.

Margaret Leon: There was a report of bees burrowing into a wood fence which have been identified as carpenter bees. We also heard of tiny red bugs on peppermint plants, which may be the nymphs of the 4-lined plant bug. There was also a request for dew resistant shrubbery.

SPECIALIST REPORT: Insect Diagnostic Lab Update

Presented by P. J. Liesch, Interim Assistant Faculty Associate, UW-Madison Department of Entomology, and Interim Manager of the UW-Extension Insect Diagnostic Lab pliesch@wisc.edu

It has been busy in the Insect Diagnostic Lab, with 100-120 submissions expected this week.

Rose Slug Sawfly

The larvae of this sawfly can cause skeletonization of roses. They are sometimes difficult to see in the foliage. They are nearing the end of their feeding period in the southern tiers of counties.

Galls

Galls cause mostly cosmetic damage and do not require any management.

Elm Sawfly

We had a couple cases of the adults. These are large scary looking insects in the same group as bees and wasps, but an earlier branch on the evolutionary tree so they do not sting.

<http://bugguide.net/node/view/37878>
<http://labs.russell.wisc.edu/insectlab/tag/elm-sawfly/>

Sand Chafer

This was submitted by Walt. These insects look similar to Japanese beetles in size and coloring, but they have a hairy pronotum (neck region). It is not a common species in Wisconsin, but it can still be confusing.

<http://www.ent.iastate.edu/soybeaninsects/node/209>

Japanese Beetle

There was a report of a Japanese beetle adult in the LaCrosse area from Krista Hamilton. It is getting to be that time and we can expect adults to be emerging in the next ten days.

Squash Vine Borer Here Shortly

We are getting to the point that treatment or protection of lower stem should be initiated.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Squash_Vine_Borer.pdf

Questions/Comments

A squash vine borer was spotted in the garden, unfortunately the squash were not yet protected.

Rock County (Christy) noted that one of her MGVs saw squash vine borer eggs on her squash. She has also published a fact sheet on the squash vine borer.

It is not surprising that the insect is already active in Rock County.

Any ideas about squash leaves that are covered with a white dust?

P.J. does not really have any ideas of insects it could be, except maybe it is powdery mildew. Brian had to leave early, but he might have some ideas.

Any comments on 4-lined plant bug? We are seeing this insect in the southeast part of the state now.

This common insect has 1 generation per year. The adults and nymphs look very different from each other, with the adult very distinctive. The nymphs are smaller and red, and the adults are yellow and black striped. You can identify them in the garden by the distinct damage they cause. They leave tiny circular lesions at the feeding site by injecting a toxin while they feed which causes localized necrosis. They may cause quite a bit of damage, but can be controlled with many different garden products.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Four_Lined_Plant_Bug.pdf

<http://entomology.osu.edu/bugdoc/Shetlar/factsheet/ornamental/FSplantbugPerennials.htm>

SPECIALIST REPORT: Plant Diagnostic Disease Clinic

Presented by Brian Hudelson, Sr. Outreach Specialist, UW-Plant Pathology, and Director of the UW-Extension Plant Disease Diagnostics Clinic (PDDC) bdh@plantpath.wisc.edu

The PDDC update is attached to the end of this summary.

Lots of dieback on conifers seen this week, many with a variation of winter injury. Much of the dieback can be attributed to the drought of 2012, as well as the dry period in 2013. Many samples of dieback on fruit trees were seen. Leaf diseases such as anthracnose and Venturia leaf blotch are starting to show up. These two look very similar but can be distinguished from each other under the microscope. Some samples with canker also were submitted, as well as samples with herbicide injury. It is important to remind people that any time an herbicide is applied, drift is a possibility.

Peach Leaf Curl

A peach sample came in with peach leaf curl. In this disease, the symptoms are purplish or yellowish seer - suckered, puckered and distorted foliage. We are expecting fungal disease to be common this year due to all the moisture.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Peach_Leaf_Curl.pdf

Chlorosis of Oak

This submission came from a tree on campus and exhibited the classic chlorosis symptoms of yellow foliage with prominent green veins. It is likely due to a combination of high soil pH and a compromised root system(since it is a young tree) leading to poor nutrient uptake and iron deficiency.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Chlorosis.pdf

Phomopsis, Valsa, and Cytospora Fungi on Apple

This apple sample had a combination of canker organisms which included Phomopsis, Valsa and Cytospora. Some do and some don't consider Valsa and Cytospora to be the same organism, but they are the sexual and asexual stage, respectively of the same fungus. It is unusual to see both of them at the same time.

<http://www.ext.colostate.edu/PUBS/garden/02937.html>

Root Rots on Petunia

Not surprisingly the wet weather is conducive to root rots. Both Rhizoctonia and Pythium were isolated from this petunia sample.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Root_Rots_in_the_Garden.pdf

Elegant Stink Horn

A lovely photo of elegant stinkhorn was submitted to the plant doc site. This fungus has a bright orange shaft that emerges from an egg shaped structure in the soil and is topped with a slimy grayish green mass at the tip where the spores are located. The fungus stinks; all the better to attract the flies which carry the spores around.

http://www.fcps.edu/islandcreekes/ecology/elegant_stinkhorn.htm

Questions

Why is it called elegant stinkhorn?

It is called elegant because it is quite pretty and colorful. There are other names that are less flattering.

Any thoughts on the wilted tomato sample mentioned earlier in the county report? Would it be good to send a sample?

Were there any black walnut trees around? Any time there are wilted tomatoes, you should check for black walnut trees nearby, which is a relative term. The roots can affect plants quite a distance from the trunk, as much as 3-5 times the height of the tree from the trunk. We also wondered if the tomatoes had been planted in the same place for successive seasons. Both verticillium and fusarium are soil borne fungal diseases that are seen frequently, which invade the water conducting tissues and cause vascular wilt. Bacterial canker can also invade the vascular tissue of the lower stem and cause collapse. We are seeing an increase in bacterial diseases, including bacterial leaf spot and the bacterial canker. You can send a sample in, but you will have to sacrifice the whole plant. You can save on postage if you bring the sample into the Hancock station.

SPECIAL TOPIC: Plant Viruses

Presented by Tom German, Plant Virus Expert, UW-Madison (Depts. of Plant Pathology and Entomology)

Introduction

Tom is a member of both the plant pathology and entomology departments. His particular interest is why and how insects transmit plant viruses.

Tom has prepared some handouts which will be posted on the WHU site for this week. This is a timely opportunity to discuss plant virology as the diseases will soon start. The most important aspect of viruses is that nothing can be done to cure the plant once it is infected. There are no vaccines for plants or rather we don't vaccinate, except using GMO may serve as a sort of vaccine. As a consequence, the most effective option is prevention, prevention, prevention. This talk will touch on some ways to do that.

Resistant Varieties

By far the most effective way to thwart viral infections is to plant resistant varieties. Sometimes the resistance is very good and durable, but sometimes it just confers tolerance of the virus. Tolerance means that the plant still gets the virus but the consequences to the crop are minor. The problem with tolerance is that if the tolerant plant becomes infected, it can serve as a reservoir host for the virus a la Typhoid Mary. The virus can then be transmitted to other plants that don't have resistance or tolerance.

Certified Plant Material

As the director of the Wisconsin Seed Potato Certification Program for 11 years, Tom is a believer in certified material. It is absolutely essential for vegetatively propagated plant material; dividing infected material compounds the spread of the infection as each piece of tissue is infected. Starting with clean material is important.

Certified seed is also critical for preventing seed transmitted viruses like some bean viruses. Even if the viral load is very low in the seed, the inoculum is already there when the seed starts to grow and exacerbates the spread of the virus through the crop.

Cultural Practices

On the color handout provided, there is information regarding this option. As shown on the chart, 70% of plant viruses are spread by a biological vector, but the remaining 30% are not. For instance, Tobacco Mosaic Virus is spread through mechanical means rather than an insect. If you can control the vector, you can control the spread

of the virus. Some cultural practices are described below. Taken together they can be very helpful in preventing transmission, although economics, money and time can be limiting factors in using these techniques.

Timing:

One cultural practice is timing of agricultural phases, such as planting or killing vegetative growth, to prevent transmission. For instance, in the tropics, in particular, or to a certain extent here, the timing of planting to avoid the influx of biological vectors can be effective. Or for seed potatoes, killing the vines early can minimize infection by late flights of aphids.

Border Crops:

Viruses transmitted by insects can have different relationships with viruses. They can be short-lived, call non-persistent transmission or long-lived in that the virus remains in the host insect for the life of the insect. In the case of one short-lived virus, Potato Virus Y, the use of border crops around the field can temporarily impede the insect vector. The insect lands on the border plants before entering the crop field and discharges the virus from its mouthparts onto the border crop before it flies onto the potato crop. Then when it does fly onto the crop, the virus is already gone.

Reflective Mulches:

Reflective mulches discourage the insect from landing, and can be used for pepper plants.

Minimize Bare Ground:

Minimizing bare ground is an especially effective technique for aphid-transmitted viruses. When aphids fly over the crops, they zero in on the bare ground to distinguish the crops.

Remove Non-Crop Host:

It is important to identify and control any non-crop hosts, such as weeds, that can serve as a source of inoculum.

Identification of Virus

A really important aspect of disease prevention is definitively identifying the virus. An important diagnostic tool is a visual inspection of the symptoms on the plant. The virus can be identified in the lab using molecular methods such as ELISA (enzyme-linked immunosorbent assay) or PCR (polymerase chain reaction).

As an aside, the naming of viruses is not necessarily indicative of the host or the most important crop that is affected. For instance, Tomato Spotted Wilt Virus (TSWV) got its name because that is the first host to be diagnosed with it. It is not common in Wisconsin except sometimes in greenhouses, but TSWV infects nearly 1000 hosts worldwide and causes billions of dollars of damage. Similarly, Tobacco Mosaic Virus infects many other hosts besides tobacco.

Know the Vector, Know the Virus

The color pie chart provided for this talk shows types of biological vectors, which are the points of control of the virus. Keep in mind that not only insects but mites, nematodes, and fungi can transmit viruses. Thrips transmit several viruses, including impatiens necrotic spot virus. They can be very difficult to control, especially in greenhouses.

One of the reasons why identification is so critical is because of these transmission vectors. For instance if you have TMV or any other mechanically transmitted virus, just taking cuttings with the same shears and moving to the next plant can spread the virus. Studies have even been done to see if hilling up potatoes and moving down the row could spread a virus. If you can identify the virus, then by default you will know the vector. If a virus is transmitted mechanically, as TMV is, it doesn't do any good to spray insecticide to control the virus.

If a virus is transmitted by an insect, you must know which insect as it also doesn't do any good to kill the wrong insect.

Virus Damage vs Herbicide Damage

It is important to know if damage is done by a virus or by herbicide injury. The symptoms can be confused and they both cause the plant morphology to change. They can be distinguished by examining the patterns on the plant tissues, because viruses have distinct patterns.

Questions/Comments

What other symptoms, besides those that look like herbicide damage, would be seen that indicate a viral infection?

Typical patterns are: concentric rings are unmistakable, mottling in the leaf, yellow blotches or chlorotic patterns, streaking down the veins, veinal necrosis. It really helps to have a non-infected plant next to an infected plant for comparison purposes. There is a virus called Tobacco Etching Virus (a misnomer since it usually affects peppers) that causes etching on the leaves. Some people, notably the inspectors involved in seed potato certification, are experts in identifying a particular virus from the patterns it produces. For diagnosis, one resource is a compendium of diseases for that crop which has gorgeous pictures of the virus symptoms.

An important control point for fields and greenhouses, is a source plant that harbors the viruses. For plants that are valuable like seed potatoes or greenhouse tomatoes, remove any infected plants that may serve as a reservoir.

What are some viruses will home gardeners encounter on ornamentals or vegetables? Specifically, we see viruses on roses based on the symptoms on the leaves. What is the vector and does the plant have to be removed? We also see tobacco rattle virus.

There are viruses on ornamentals, Tobacco Rattle Virus is one. I think that may be a nematode vector. Yes, the infected rose should be removed and replaced with a virus-free plant. Certified plant material is available. Rose mosaic virus is transmitted by aphids and multiflora rose can be a host for that. People have tried to use nasty viruses as a biological control for multiflora rose, but rose growers really don't like that idea.

Should people be planting potatoes from their pantries or that they buy at the grocery store? What is that chance that those potatoes would have a virus?

They should use certified seed potatoes specifically for planting. Grocery store potatoes may not germinate because they haven't had a cold storage period. Certified seed potatoes are sold in small lots so why not use them. If you do keep your potatoes, give them a cold treatment so they do germinate, you may be accumulating infected stock. In a home garden, the loss may not be significant like it is for a commercial grower, but it is good practice to use certified seed. Infected stock can transmit the virus, like PVY, to other ornamentals or other vegetables.

For tobacco rattle virus, is the nematode vector a soil or leaf nematode? Does the soil have to be removed?

It is a soil nematode, so the soil may serve as a source. Most nematode viruses can also be transmitted through seed, although it is unlikely that the gardener grew it from seed.

http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Tobacco_Rattle.pdf

We frequently see Tobacco Rattle Virus on bleeding heart. It is one of Brian's favorites because the patterns are so attractive.

I did not know that bleeding heart served as a host. That reminds me that it is very important to buy certified bulbs from the Netherlands. Gladiolus frequently carries viruses which can stunt their growth. Sometimes they won't be stunted but the flowers exhibit a pattern called flower break which causes the petals to be attractively striped. Eventually, the virus causes the bulb to weaken. In the 1700's before viruses were known, people paid a fortune for bulbs with the flower break pattern. One Dutch guy cut a normal bulb and a flower break bulb in half, then put a normal half with the flower break half, separated them and grew them out. When both exhibited the flower break pattern, they surmised that the patterns were caused by a pathogenic agent. This was one of the earliest experiments in disease transmission.

Gladiolus, tulips and other bulbs can show this pattern, which is symptomatic of the virus. That is why it is so important to purchase certified disease free bulbs.

What about parrot tulips? How do they maintain the patterns without infecting other tulips or weakening the bulb?

The patterns can be caused by a virus or by genetic breeding. For instance, leaves with variegation are bred for those patterns. Virus infection messes with the plant genome which causes the patterns. If you have deliberately manipulated the genes, it doesn't spread because it isn't an infection.

For sanitation, besides removal of the infected plant, what can be done to clean up virus on tools or clothing?

If you are removing infected plants, called roguing, you can carry a pail to put the rogued plants in. You want to keep those plants separated, especially for viruses like TMV where just touching another plant with the infected one can transmit the virus. Cutting or pruning tools are an easy way to transmit viruses. In greenhouses in Hawaii where they are cutting many orchids, they carry a belt with numerous pairs of shears and use the shears on only one plant. After they use all the shears just once, the belt with the used shears is brought to be disinfected.

How should we advise a home gardener, who doesn't have access to many pairs of shears, to disinfect their tools?

Soaking the tool in a weak solution of trisodium phosphate (TSP) for a short time is effective. For cutting seed potatoes, 1%TSP with a phenolic compound to control bacterial pathogens, is used to sterilize the tools. Any other strong detergent, like SDS (sodium dodecyl sulfate), can sterilize the tool.

ANNOUNCEMENTS

Brian had mentioned that Darlene, who had been writing the summary for this broadcast, had been diagnosed with a serious illness. Darlene wanted people to know she has been diagnosed with Stage 4 ovarian cancer and has undergone surgery to remove numerous tumors. She will be returning to the Mayo Clinic for treatments for a period of six months. If you would like to send Darlene a card, you can eMail Sharon Morrissey and she will send you Darlene's address.

FINAL NOTES

Next week is the Fourth of July! The next meeting is July 11. Heidi Doering from St. Croix county will be hosting and Christelle Guédot will be back to present an update on Spotted Wing Drosophila.

The full audio podcast of today's and archived WHU conferences can be found at <http://fyi.uwex.edu/wihortupdate/>

UW LINKS

Wisconsin Horticulture webpage <http://hort.uwex.edu>

UW Plant Disease Diagnostics webpage <http://labs.russell.wisc.edu/pddc/>

UW Insect Diagnostic Lab <http://www.entomology.wisc.edu/diaglab/>

UW Turfgrass Diagnostic Lab <http://labs.russell.wisc.edu/tdl/>

UW Vegetable Pathology Webpage <http://www.plantpath.wisc.edu/wivegdis/>

UW Vegetable Entomology Webpage <http://www.entomology.wisc.edu/vegento/people/groves.html#>

UW-Extension Weed Science <https://fyi.uwex.edu/weedsci/>

UW-Extension Learning Store <http://learningstore.uwex.edu>

UW Garden Facts <http://labs.russell.wisc.edu/pddc/fact-sheet-listing/>

WHU "OFF THE AIR"

During this past week specialists have commented on these issues off the air:

Apple Dieback and Death

Due to the statewide problems with dieback on fruit trees, especially apple trees, Kevin Schoessow asked for input on what to communicate to disheartened homeowners. He said that they had record breaking cold and snow this winter, as well as freezing temperatures from October to May. Patty McManus responded with some information, which is summarized below.

The damage is statewide, but appears to be progressively greater the farther north one goes in the state. The trees were already stressed from the 2012 drought and heavy fruiting in 2013. The quick transition to freezing weather late last fall compounded by poor snow cover may have damaged roots and scions. Patty is still looking for research on apple hardiness, so recommendations are general for woody plants. In the meantime, here are some things to tell homeowners.

1. *Do not allow your stressed tree to fruit heavily.*
2. *Irrigate if we start getting dry. If trees do have damage to water conducting tissue, dryness will exacerbate the problem.*
3. *Do not fertilize, which will stimulate leaf growth and strain water conduction more.*
4. *Remove weeds and grass within the tree dripline to prevent competition for water.*
5. *Remove dead tissue and prune way back to living tissue and retrain the canopy. The homeowner needs to decide if they prefer this option or just replacing the tree. Replanting in the same hole is not recommended to avoid any fungi that may be in the soil. If replanting is done in the same hole, at least remove the soil and amend with fresh soil.*

Other suggestions on how to deal with this situation are welcome.

Neonicotinoid Residue on Garden Center Plants

Vijai posted a link to an article on whether greenhouse plants treated with neonicotinoids retained enough residue in their tissues to be a threat to bees.

http://msue.anr.msu.edu/news/planting_garden_center_flowers_is_good_for_bees_and_other_beneficial_insect?utm_source=Turf+%26+Landscape+-+MSU+Extension+News+-+6-26-14&utm_campaign=Landscape+%26+Turf+6-26-14&utm_medium=email

VEGETABLE CROP UPDATE

Vegetable Crop Update Newsletter #11 is available at <http://www.plantpath.wisc.edu/wivegdis/>

Topics covered in the issue include:

- Late blight updates
- Blitecast and P-Days for late blight and early blight management
- Onion fungicide updates for 2014
- Vegetable disease report from UW Plant Disease Diagnostic Clinic
- Agenda for Hancock Potato Field Day - July 22, 2014 - Felix Navarro

PDDC UPDATE

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Joyce Wu, Tom Hinsenkamp, and Catherine Wendt, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from June 21, 2014 through June 27, 2014.

PLANT/SAMPLE	DISEASE/DISORDER	PATHOGEN	COUNTY
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TYPE			
BROAD-LEAVED WOODY ORNAMENTALS			
Boxwood	Fusarium Canker	<i>Fusarium</i> sp.	Door
	Volutella Blight	<i>Volutella</i> sp.	Door
	Winter Injury	None	Door
Cherry	Root Rot	<i>Pythium</i> sp., <i>Cylindrocarpon</i> sp.	Dane
	Winter Injury	None	Dane
Heptacodium	Winter Injury	None	Racine
Maple ('Autumn Blaze')	Sphaeropsis Canker	<i>Sphaeropsis</i> sp.	Dane
Maple (Unspecified)	Anthracnose	<i>Discula</i> sp.	Manitowoc
	Venturia Leaf Blotch	<i>Cladosporium humile</i>	Manitowoc
Oak (Bur)	Herbicide Damage	None	Dodge
	Tatters	None	Dodge
Oak (Unspecified)	Chlorosis	None	Dane
Plum	Winter Injury	None	Rock
FRUIT CROPS			
Apple	Black Rot	<i>Diplodia</i> sp.	Walworth
	Phomopsis Canker	<i>Phomopsis</i> sp.	Marathon
	Valsa Canker	<i>Valsa</i> sp./ <i>Cytospora</i> sp.	Marathon
	Winter Injury	None	Portage, Walworth
Grape	Anthracnose	<i>Sphaceloma ampelinum</i>	Columbia
Peach	Peach Leaf Curl	<i>Taphrina deformans</i>	Dane
	Winter Injury	None	Dane
HERBACEOUS ORNAMENTALS			
Petunia	Root Rot	<i>Pythium</i> sp., <i>Rhizoctonia solani</i>	Waukesha
NEEDED WOODY ORNAMENTALS			
Dawn Redwood	Winter Injury	None	Racine
Fir (Concolor)	Winter Injury	None	Racine
Pine (Unspecified)	Winter Injury	None	Dane
Spruce (Unspecified)	Spruce Needle Drop	<i>Setomelanomma holmii</i>	Dane
Yew	Winter Injury	None	Washington
VEGETABLES			
Pepper	Bacterial Spot	<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i>	Dane
Rhubarb	Ramularia Leaf Spot	<i>Ramularia</i> sp.	Dane
	Slug Injury	None	Dane
Tomato	Herbicide Damage	None	Clark

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu