

Wisconsin Horticulture Update July 12, 2013

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WI WEATHER REVIEW

For the week ending July 8, 2013, soil moisture dropped from 43% surplus to 22% surplus, making conditions more favorable for field and garden work, although many low-lying areas are still wet. Heat and high humidity boosted crop growth overall

Across the reporting stations, average temperatures last week were 1° below to 1° above normal. Average high temperatures ranged from 75° to 85°, while average low temperatures ranged from 57° to 62°. Precipitation totals ranged from 0.00” in Eau Claire to 0.34” in Milwaukee. (WI Crop Report)

Growing degree days (GDD)

Growing degree days is an accumulation of maximum and minimum temperature averages as related directly to plant and insect development. This week, the GDD_{mod50} in Wisconsin ranged from 667.6 to 1366.3. Following is a list of GDD as of July 12, 2013 for the following cities: Bayfield 667.6, Beloit 1366.3, Crandon 883.8, Cumberland 975.9, Dubuque 1278.0, Eau Claire 1104.5, Fond du Lac 1063.3, Green Bay 981.9, La Crosse 1193.0, Madison 1227.8, Milwaukee 1023.6, Wausau 957.8. To determine the GDD of any location in Wisconsin, use the degree day calculator at the UW Extension Ag Weather webpage http://www.soils.wisc.edu/uwex_agwx/thermal_models/degree_days

To put it in perspective, following is an abbreviated list of plant and insect phenological stages in relation to GDD accumulations at which the events occur. Common lilac first bloom 207; common flowering quince full bloom 208; Sargent crabapple first bloom 213; wafaring tree viburnum first bloom 227; **elm leafminer adult emergence 228**; Koreanspice viburnum full bloom 233; eastern redbud full bloom 254; common horsechestnut first bloom 260; **pine needle scale egg hatch 1st generation 277**; Sargent crab full bloom 282; **eastern spruce aldehyd egg hatch 283**; wayfaringtree viburnum full bloom 287; blackhaw viburnum first bloom 301; redosier dogwood first bloom 311; common lilac full bloom 323; **lilac borer adult emergence 324**; Vanhoutte spirea first bloom 329; common horsechestnut full bloom 344; **lesser peach tree borer adult emergence 362**; **oystershell scale egg hatch 363**; blackhaw viburnum full bloom 370 pagoda dogwood first bloom 376; redosier dogwood full bloom 408; Vanhoutte spirea full bloom 429; black locust first bloom 455; pagoda dogwood full bloom 486; smokebush, first bloom 501; common ninebark first bloom 507; arrowwood viburnum first bloom 534; **bronze birch borer adult emergence 547**; black locust full bloom 548; **potato leafhopper adult arrival 568**; **juniper scale egg hatch 571**; common ninebark full bloom 596; 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**; northern catalpa full bloom 816; **cottony maple scale egg hatch 851**; panicle hydrangea first bloom 856; **fall webworm egg hatch 867**; fuzzy deutzia full bloom 884; **winged euonymus scale egg hatch 892**; chickory full bloom, **squash vine borer adult emergence 900**; **Japanese beetle first emergence 970**; littleleaf linden full bloom 1117; Rose-of-Sharon first bloom 1347; **pine needle scale egg hatch, 2nd gen. 1923**; **magnolia scale egg hatch 1938**; **banded ash clearwing borer adult emergence 2195**.

INTRODUCTION

The host for today's WHU was Commercial Horticulture Educator Kristin Krowkowski. PDDC Director Brian Hudelson, Insect Diagnostic Lab Director Phil Pellitteri, and Vegetable Pathologist Amanda Gevens were special guests. Participants in today's discussions were representatives from the following counties: Brown (Vijai Pandian), Douglas/ Superior (Jane Anklam), Eau Claire (Erin LaFavre), Kenosha (Barb Larsen), Marinette/ (Scott Reuss), Outagamie (Jill Botvinik), Portage (Sophie Demchik), Racine (Patti Nagai), Walworth (Chrissy Wen), Waukesha (Kristin Krowkowski), and Winnebago (Kim Miller).

The hot topic in the UW-Extension offices has been trees the past two weeks. Trees in decline, trees showing early fall color, trees yellowing, trees browning, trees with dieback, trees with Verticillium wilt, oaks and crabapple trees with curling leaves, oaks dropping leaves, apple trees with scab, plums and cherries with black knot, and elms with Dutch elm disease were just some of the problems addressed. In the north, rose chafers, aphids and wooly alder aphids were on the decline. Other areas are still seeing high numbers of aphids, squash vine borer, and ant mounds in lawn and garden. In Madison and in most of the eastern counties, Japanese beetles were trickling in, but in Brown Co., they have caught everyone's attention. With favorable conditions for weed growth, weed identification and control measures were sought after; in the western part of the state, poison ivy was a big concern.

This week soil moisture was reported as highly variable, some areas still experiencing wet conditions and other areas drying out. Phenological indicators noted: chickory in bloom in Walworth Co., Annabelle hydrangeas in Portage Co.

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 updates for the past two weeks are attached to the end of this summary.

Vegetable Diseases

Black rot on cabbage

Cabbage samples from Outagamie and Walworth Counties were diagnosed with black rot. The typical indications of black rot on cabbage are V-shaped, angular necrotic areas on leaves, often with the wider part of the "V" toward the edge of the leaf and following the veins, and yellowing around the edge of the necrotic tissue. In the lab, the colonies of the bacterium show up bright yellow and mucoid when plated on differential media.

Black Rot of Crucifers (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Black_Rot_of_Crucifers.pdf

Blackleg on potato

The same bacterium causing bacterial soft rot is responsible for black leg on potato. Potato stems present with blackish lesions at the base of the stem, causing collapse of the plant.

Blackleg of Potato (APSnet): <http://www.apsnet.org/edcenter/intropp/lessons/prokaryotes/Pages/Blacklegpotato.aspx>

Early not late blight

Samples submitted for late blight have tested negative thus far, but one did have early blight.

Early Blight (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Early_Blight.pdf

Woody Woes

Verticillium Wilt

Verticillium is active this year. A Japanese tree lilac and a catalpa were found positive for Verticillium wilt. At Farm Tech Days last week, someone described having seen symptoms of Verticillium wilt on another catalpa.

Verticillium Wilt (UWEX):

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

Oak Leaf Blister

Taphrina is another active pathogen this season. An oak sample came in with oak leaf blister caused by *Taphrina*.

Oak Leaf Blister (Cornell): <http://plantclinic.cornell.edu/factsheets/oakleafblister.pdf>

Powdery Mildew

Weather conditions have also been favorable for powdery mildew. Ninebark is especially notorious for being affected with this disease. The infection may be so severe as to cause branch dieback. Prune out infected parts and open up the canopy to reduce humidity and increase circulation.

Powdery Mildew (UWEX):

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

Pale oak leaves

A client has oaks with sections with lime-green foliage. What issues should we be looking for?

Initial stages of chlorosis may be indicated by light green foliage with darker veins; as it progresses the leaves may become brown and drop. It is possible for some sections to be more affected than others. Another thing to look for are low-grade cankers that may cut off enough nutrients and water flow to the leaves to cause discoloration and browning. Anthracnose could possibly be involved. Oak wilt is also a consideration to be found anywhere in the state; we have had two positive oak wilt samples already this year.

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

Anthracnose (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Anthracnose.pdf

Oak Wilt (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Oak_Wilt.pdf

Disease Questions

Sending Samples

What is the best way to keep samples before sending to the PDDC?

When sending suspected oak wilt samples, they must be kept very cool, packed in ice if possible; when the tissue is warmed, the fungal population is reduced so it cannot be recovered in the lab.

Any other samples sent for disease confirmation should be taken fresh for best recovery of pathogens. Sending samples Monday through Wednesday should arrive before the weekend, and not be subject to sitting in hot post offices or trucks. If you must keep a sample over the weekend to send out on Monday, keep it refrigerated. Better yet, have the client send us the sample directly on a Monday.

Sample Collection and Submission (UWEX-PDDC): <http://labs.russell.wisc.edu/pddc/sample-collection-and-submission/>

Black-tipped poplars

A client has been growing 50 hybrid poplar seedlings for a few years. Now some of them are displaying dried, burnt-looking tips, similar to the look of fireblight. The pattern is spreading from the bottom to the top. A sample is being sent to you. What could be the cause?

It could be due to a variety of things, but is probably fungal. There is a *Venturia* disease, aspen and poplar shoot blight; it is related to apple scab but is a different disease. *Septoria* is a possibility. *Marssonina*, related to a

disease that causes black spot on roses, is another consideration. A recent willow sample with a lot of browning was due to anthracnose.

Aspen and Poplar Leaf Spots (Colorado State): <http://www.ext.colostate.edu/pubs/garden/02920.html>

Fruit diseases

More Taphrina

In fruit trees, a *Taphrina* variant was responsible for peach leaf curl and plum pockets in samples submitted.

Peach Leaf Curl (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Peach_Leaf_Curl.pdf

Peach Leaf Curl and Plum Pockets (U. Kentucky): http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-FR-T-1.pdf

Grape problems

Grapes have been hit hard with downy mildew and anthracnose this year due to favorable weather conditions for those diseases.

Growing Grapes in Wisconsin (UWEX): <http://www.ext.colostate.edu/pubs/garden/02920.html>

Herbaceous plant diseases

Root rots

Root rots were found to be prevalent on bedding plants, especially on geraniums. This is not surprising with the amount of rainfall this year.

Root Rots in the Garden (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Root_Rots_in_the_Garden.pdf

Southern blight

A monkshood sample from Waukesha Co. tested positive for the very dreaded pathogen causing southern blight. The client had observed patches of diseased plants showing up throughout the garden. The pathogen was suspected of having been brought in on contaminated composted material, especially after a friend, having also purchased compost from the same source, was seeing similar issues. Southern blight is very aggressive and kills most herbaceous plants in its path.

Diagnostic indicators for southern blight include large amounts of hyphal growth on the plant surface and the presence of sclerotia, or resting structures. The size of an osmocote pellet, the sclerotia are tan to reddish-brown, peppered over the surface of the infected plant, particularly near the base. The sclerotia will also form on the mulch.

Southern Blight (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Southern_Blight.pdf

SPECIALIST REPORT: Insect Diagnostic Lab Update

Presented by Phil Pellitteri, Distinguished Faculty Associate, UW-Madison Department of Entomology and Director, UW-Extension Insect Diagnostic Lab pellitte@entomology.wisc.edu

Japanese Beetles

Samples are coming in at 120 per week, on a variety of insects, but not much is noteworthy. As anticipated, Japanese beetle in Madison has been light, very few causing problems the past two weeks; this is most probably due to the aftermath of last year's drought, and because it has been a long standing population in the area, which is ripe for decline.

Japanese Beetles (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Japanese_Beetle.pdf

Spotted Wing Drosophila

The most significant news this week is that Cristelle Guedot's lab trapped at least two spotted wing drosophila in the Kickapoo Valley. These are the first finds of the year, and within the next week or two it should be known if their presence will be picking up. The fall raspberry crop may be at risk again this year.

Spotted Wing Drosophila (Oregon State): <http://spottedwing.org>

Blister Beetles

Folks attending Farm Tech Days last week had some concerns about blister beetles. The dark greenish species of this group feed on a variety of flowers, especially lupine. One characteristic of this pest is that it seems to show up overnight, and eat all the flowers and flies away without re-occurrence; the damage is considered cosmetic only.

Squash Vine Borers and Bugs

In the southern part of the state, it may be too late to treat squash vine borers.

Squash bugs were quite problematic last year; it will be interesting to see how strong they will come on this year. They are starting their second generation now, so it will be something to watch.

How effective are exclusionary strategies against squash vine borer? Also, if adults are seen, are there any organic products that can be used against them?

Physical techniques can work, but are very time consuming. People will go out and scrape off eggs every day to reduce numbers. Aluminum foil collars force the wasps to lay eggs higher on the stem, but they can still migrate out. Row covers can reduce populations about 70%.

Regarding insecticides, the spinosads are very effective and a great tool, far better than Bt that did not work well. Usually one application, when chickory is in bloom, is effective, coinciding with adult emergence, but a second application may be made two weeks after the first if populations are high.

Squash vine borers are first attracted to summer squash, then pumpkins and winter squash. They do not harm cucumbers; if eggs are laid on cucumbers, the larva hatch and die within a day. There seems to be a natural compound in cucumber that makes them resistant. Interestingly, only Wisconsin and Pennsylvania have a big problem with squash vine borer; in other areas it is just a minor problem.

Squash Bug (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Squash_Bug.pdf

Squash Vine Borer (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Squash_Vine_Borer.pdf

Black Flies

There have been a lot of complaints about black flies in the southern part of the state. There are quite a few different types. The traditional ones came out in May to early June, so there is a potential for a second hatch this year. Most of them feed on birds, and there was a substantial amount of bird mortality because of them. A different species preferring humans are starting to show up now; they show up as clouds of gnats and will bite around the head and neck.

Black Fly (UW-Milwaukee Field Station): <http://www4.uwm.edu/fieldstation/naturalhistory/bugoftheweek/black-fly.cfm>

Ants

Ant questions continue. If they are outdoors and not causing problems it is best to leave them alone. It is not uncommon for cornfield ants to have nine to twelve nests per square yard. If a nest is visible and there is a need to treat, poke deep into the mound with a screwdriver or post and pour liquid insecticide into the hole; surface applications will not be effective. If nests are not seen, especially indoors, determine their preference for sweets or proteins and purchase appropriate baits.

Field Ants (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Field_Ants.pdf

What to do About Household Ants (UMN): <http://www1.extension.umn.edu/garden/insects/find/what-to-do-about-household-ants/>

Disappearing Tomatoes

A veteran vegetable gardener had thirty-two 24" high tomato plants growing and during the night. Thirty of them were mowed to the ground with no clue of how they disappeared. Could it have been an army of cutworms?

Cutworms would not have the ability to feed on something that big. It was probably deer, woodchuck or other four-legged pests.

SPECIALIST REPORT: Vegetable Disease Update

Presented by Amanda Gevens, Assistant Professor, Extension Plant Pathologist in Potatoes and Vegetables
gevens@wisc.edu

Bacterial Diseases

Black rot

Black rot has been seen in commercial cabbage and direct market farms. Curly leaf kale seems particularly susceptible to the disease. The symptoms are V-shaped leaf margin necroses, with the yellowing “V” at the edge of the leaf, and possibly some rotting of the lower stem or plant crown.

Black rot is typically seed-borne, even when seed is considered 99.9% clean. It is surprising how the 0.1% presence of bacterium can create an epidemic, especially in wet or flooded fields. The pathogen is not a good soil-borne disease, so when debris degrades in soil, the pathogen typically is removed from the soil environment. The disease should not be a persistent problem from year-to-year. Nonetheless, a two-to three-year crop rotational plan is good assurance to limit disease in coming years.

Black Rot (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Black_Rot_of_Crucifers.pdf
Using Crop Rotation in the Home Vegetable Garden (UWEX):
http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Using_Crop_Rotation_in_the_Home_Vegetable_Garden.pdf

Bacterial speck and spot

Tomatoes and peppers have been seen with bacterial speck and spot. In every tomato field visited last week, there had been some bacterial speck.

The symptoms are quite diagnostic. A small black blister-like, or firm, lesion forms on the leaves, initially quite small, on the leaf margins and on the lower stem, and eventually on to the fruit. On the fruit, black, firm, scab-like lesions can be seen and felt. They may seem inconsequential at first, but they can rapidly spread across all of the newer fruit, creating an unappealing condition. If the black specks enlarge, secondary pathogens can come in affecting the quality of the fruit. The specks on the skin cannot be removed easily, so if the spotted tomatoes are being used for canning or processing, it presents a challenge when the hard specks won't come off while the skin is steamed or parboiled.

Tomato bacterial speck and spot are typically seed-borne pathogens. Once an epidemic starts in a garden or field, it is difficult to stop. Cultural practices that limit foliar wetness and promote good airflow in the lower canopy, such as trellising, staking, or removal of the lower lateral two to three branches, are beneficial. Limiting splash that bring bacteria up to the lower leaves, leaves that are wet longer, can help tremendously.

Copper-containing products are available for home garden and conventional use. Not a cure-all, they can help limit the plant-to-plant spread of bacterial pathogens. This is considered a remedy for all the bacterial diseases mentioned.

Bacterial Diseases of Tomato (Cornell): http://vegetablemendonline.ppath.cornell.edu/factsheets/Tomato_Bacterial.htm

Blackleg on potato

Blackleg on potato is caused by *Pectobacterium atrosepticum*. Typically it is soil-borne, but it can also be seed-borne. Characteristic of this disease are blackened stems that are slimy and smell bad. Initially, plants begin to yellow or senesce, and the lower part of the stems will have a black discoloration down to the seed piece below ground. Cutting open the stem will show oozy, slimy, smelly tissue; at that senescent stage, it is not fixable. It is recommended to early harvest and use the potatoes. The potatoes may not be affected, but typically they do not store very well.

Blackleg of Potato (APSnet): <http://www.apsnet.org/edcenter/intropp/lessons/prokaryotes/Pages/Blacklegpotato.aspx>

Viral Disease

In pockets throughout the state, virus has been seen on cucurbit crops. In some small farms, viruses were seen on cucurbit, tomatoes and peppers. Aphids bring the virus into the plants, and the plant begins its disease response, the end-result curling, gnarling and bubbling of the plant tissues. When this is severe, affected plants, particularly cucurbits, may not produce functional, usable fruit.

Virus Disease of Cucurbits (Cornell): http://vegetablemndonline.ppath.cornell.edu/factsheets/Viruses_Cucurbits.htm

Fungal Diseases

Downy Mildew

It has not been seen in Wisconsin yet, but downy mildew has been found on cucurbits and various squash in northwestern Ohio, on cucurbits in southern Ontario, and spores have been air-trapped in Michigan, though not found in the field yet. Traditionally when these regional reports align, downy mildew is seen in Wisconsin.

The symptoms of downy mildew initially are yellowing of leaves; as the pathogen progresses, angular yellow lesions occur on the plants. When the leaves are flipped over, there are telltale signs of fuzzy gray spores growing on the underside. For home gardeners and organic growers, copper products are available; for commercial growers, there are additional reduced-risk products that are effective.

Downy Mildew (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Downy_Mildew.pdf

Phytophthora

Soil-borne Phytophthora crown and fruit rots have been seen in pockets throughout the state. They have a devastating effect on cucurbits and solanaceous crops. Characteristic signs are water-soaked rots on fruit touching the ground or on lower stems. The tissue may exhibit an almost fuzzy growth that is the presence of the sporulating pathogen.

Phytophthora Blight of Cucurbits, Peppers, Tomatoes and Eggplants (Cornell):
http://vegetablemndonline.ppath.cornell.edu/factsheets/Cucurbit_Phytoph.htm

Late blight

Late blight reports have slowed down lately. Earlier this summer there were confirmations in Adams and Juneau Counties on commercial potatoes, and on July 2 in Sauk County on home garden tomatoes. The blight in Sauk Co. had probably been active for two weeks, having gone through several cycles of the pathogen. Be observant and make factsheets and control recommendations available to gardeners to slow the progress of this disease.

Late Blight (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Late_Blight.pdf

Other foliar pathogens

Septoria and early blight on lower canopies are seen every year. They are starting in southern and central Wisconsin. Maintaining good cultural practices, keeping foliage dry, and irrigating from below, can be helpful to limit these diseases.

Septoria Leaf Spot (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Septoria_Leaf_Spot.pdf
Early Blight (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Early_Blight.pdf

Questions

Yellowing snap peas

Snap peas are turning yellow from the bottom up. Is this a nutritional problem?

That has also been seen on commercial pea crops and direct market farms in central Wisconsin. There may be a loss of nitrogen in the soil profile with the excessive rains, especially if the plants were planted early and experienced the cold and wet weather. There are also some bacterial and fungal pathogens that are detected in lower canopies of peas, such as downy mildew and a bacterial leaf disease. *Aphanomyces* root rot will also cause yellowing and drying of the bottom canopy, but the tops stay green.

Aphanomyces Root Rot (common root rot) of Legumes (APSnet):
<http://www.apsnet.org/edcenter/intropp/lessons/fungi/Oomycetes/Pages/Aphanomyces.aspx>

Interveinal speckling on squash

Squash plants are exhibiting interveinal necroses and yellowing of the lower leaves. The necroses are small spots between the veins. What could cause this?

It doesn't sound like a disease. Some nutritional deficiencies cause spotting between veins on leaves. On oak, severe iron deficiency goes from interveinal yellowing to speckling to browning.

Diagnosing Nutrient Disorders in Fruit and Vegetable Crops (UMN):

<http://www.extension.umn.edu/distribution/horticulture/M1190.html>

Symptoms of Deficiency in Essential Minerals (Plant Physiology Online): <http://5e.plantphys.net/article.php?ch=t&id=289>

General Questions

Cherry fruit drop

A client has numerous fruit tree problems, among them are cherries have just set fruit and they are falling off the tree. Could this be climate related?

It could be due to pollination issues, or if there was excessive fruit set, the trees may self-prune.

Fruit Drop in Tree Fruits (U Delaware): <https://extension.udel.edu/weeklycropupdate/?p=5786>

ANNOUNCEMENTS

July 30: WI Turfgrass Field Days. AJ Noerr. For general information on Turfgrass Field Days:

http://www.wisconsinturfgrassassociation.org/Field_Day.htm

August 7: Trial Garden and Plant Health Field Days at Boerner Botanical Gardens

<http://counties.uwex.edu/waukesha/files/2010/12/2013-PHFD-Brochure-small.pdf>

August 8: WNA Field Day <http://www.wgif.net/wna-wisconsin-nursery-association.aspx>

August 20 – 22: Diagnosing Tree/Shrub Diseases & Pests Workshops sponsored by Winnebago, Outagamie and Brown Co. UW -Extensions. http://winnebago.uwex.edu/files/2010/05/2013-Insect_Disease-Brochure.pdf

FINAL NOTES

The next Wisconsin Horticulture Update will be held on July 19. The host will be Kevin Schoessow and the special topic will be ornamental grasses.

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 Science <http://turf.wisc.edu/>

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 <http://turf.wisc.edu/>

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 the past two weeks specialists have commented on these issues off the air:

New Garden Facts

There are four new University of Wisconsin Garden Facts:

- Black Rot of Crucifers
- Brown Rot
- Impatiens Downy Mildew
- Red Thread

They are available at the UW-Extension Horticulture website:

http://hort.uwex.edu/sites/default/files/Black_Rot_of_Crucifers.pdf

<http://hort.uwex.edu/articles/brown-rot>

<http://hort.uwex.edu/articles/impatiens-downy-mildew>

<http://hort.uwex.edu/articles/red-thread>

and on the PDDC website:

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

Vegetable Newsletter

Vegetable Newsletter #11 features articles on the following topics:

- DSVs/Blitecast for late blight management (late blight confirmed in Adams, Juneau, Sauk Counties)
- PDays for early blight management in potato
- Cucurbit downy mildew status
- Black rot in cabbage and other cole crops
- Tomato bacterial diseases

The newsletter will be found on the vegetable pathology website: <http://www.plantpath.wisc.edu/wivegdis/>

New EAB Quarantine

DATCP has announced that emerald ash borer was found on the UW-Whitewater campus. Jefferson County is now under quarantine.

http://content.govdelivery.com/attachments/WIDATCP/2013/07/05/file_attachments/223234/EABJeffersonCounty.pdf

PLANT DISEASE DIAGNOSTIC CLINIC UPDATE

Update 6/29/13 - 7/5/13

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, Plant Disease Diagnostics Clinic

The UW-Extension/ Madison 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 29, 2013 through July 5, 2013.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
BROAD-LEAVED WOODY ORNAMENTALS			
Birch (River)	Chlorosis	None	Sheboygan
Honeylocust	Root Rot	<i>Phytophthora</i> sp., <i>Pythium</i> sp., <i>Cylindrocarpon</i> sp.	Dane
Honeysuckle	Powdery Mildew	<i>Oidium</i> sp.	Milwaukee
Lilac	Root Rot	<i>Pythium</i> sp., <i>Fusarium</i> sp.	Sawyer
Maple	Chlorosis	None	Sheboygan
Oak (Bur)	Anthracnose	<i>Discula</i> sp.	Waukesha
	Tubakia Leaf Spot	<i>Tubakia</i> sp.	Waukesha
Rose	Chlorosis	None	Sheboygan
Willow	Anthracnose	<i>Discula</i> sp.	Bayfield
	Marssonina Leaf Spot/Twig Blight	<i>Marssonina</i> sp.	Bayfield
FRUIT CROPS			
Apple ('Gala')	Fire Blight	<i>Erwinia amylovora</i>	Lincoln
HERBACEOUS ORNAMENTALS			
Lysimachia	Gray Mold/Botrytis Blight	<i>Botrytis cinerea</i>	Mchenry (IL)
	Phyllosticta Leaf Spot	<i>Phyllosticta</i> sp.	Mchenry (IL)
NEEDED WOODY ORNAMENTALS			
Spruce (Unidentified)	Spruce Needle Drop	<i>Setomelanomma holmii</i>	Dane
VEGETABLES			
Garlic	Aster Yellows	Aster Yellows Phytoplasma	Waukesha
Tomato	Late Blight	<i>Phytophthora infestans</i>	Sauk

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

Update 7/6/13 - 7/12/2013

The following diseases/disorders have been identified at the PDDC from July 6, 2013 through July 12, 2013.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
BROAD-LEAVED WOODY ORNAMENTALS			
Ash	Anthracnose	<i>Discula</i> sp.	Chippewa
Lilac (Japanese Tree)	Verticillium Wilt	<i>Verticillium</i> sp.	Brown
Maple (Japanese)	Nectria Canker	<i>Nectria</i> sp.	Dane
Maple (Northern Red)	Sphaeropsis Canker	<i>Sphaeropsis</i> sp.	Marinette
FRUIT CROPS			
Apple	Apple Scab	<i>Venturia inaequalis</i>	Monroe
Grape	Anthracnose	<i>Sphaceloma ampelinum</i>	Columbia
	Herbicide Damage	None	Richland
Peach	Peach Leaf Curl	<i>Taphrina deformans</i>	Dane
HERBACEOUS ORNAMENTALS			
Geranium	Gray Mold/Botrytis Blight	<i>Botrytis cinerea</i>	Milwaukee
	Root Rot	<i>Pythium</i> sp., <i>Cylindrocarpon</i> sp.	Milwaukee
Monkshood	Southern Blight	<i>Sclerotium rolfsii</i>	Waukesha
NEEDED WOODY ORNAMENTALS			
Pine (White)	Root Rot	<i>Pythium</i> sp.	Dane
VEGETABLES			
Cabbage	Black Rot	<i>Xanthomonas campestris</i> pv. <i>campestris</i>	Outagamie, Walworth
Potato	Black Leg	<i>Pectobacterium carotovorum</i>	Sauk, Sherburne (MN)
	Early Blight	<i>Alternaria solani</i>	Dane

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