

Wisconsin Horticulture Update Summary, September 04, 2015

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WI WEATHER REVIEW

Hot and humid weather provided a welcome boost to crop maturity this week, with temperatures 6 to 9 degrees above normal statewide. A midweek storm brought rain to the northern half of the state and there were showers and thunderstorms statewide on Sunday night. High humidity, fog and heavy dew made it difficult for hay to dry and reportedly contributed to the appearance of mold or mildew in some fields. (Volume 15, Issue No.23, Sept.08, 2015 of Wisconsin Crop Progress and Condition)

Average soil temperatures at 2" as of September 04, 2015: Hancock 75.9, Arlington 82.7
(http://agwx.soils.wisc.edu/uwex_agwx/awon/awon_seven_day)

Growing degree days (GDD)

Growing degree days is an accumulation of maximum and minimum temperature averages as related directly to plant and insect development. The summarized data list for the GDD for this week was no longer available at the time of this summary. GDD were approximated using GPS coordinates and the Generic Degree Day Calculator, but exact coordinates can't be specified with this tool
(http://agwx.soils.wisc.edu/uwex_agwx/thermal_models/degree_days).

This week, the GDDmod50 in Wisconsin ranged from 1698 to 2563. Following is a list of approximate GDD as of September 4, 2015 for the following cities: Appleton-2127, Bayfield-1698; Beloit-2563; Big Flats-2122; Crandon-1750; Crivitz-1903; Cumberland-2026; Eau Claire-2274; Green Bay-2016; Hancock-2257; Hartford-2069; Juneau-2226; LaCrosse-2515; Lone Rock-2422; Madison-2430; Medford-1861; Milwaukee-2176; Port Edwards-2009; Racine-2065; Sullivan-2226; Waukesha-2027; Wausau-1825. To determine the GDD of any location in Wisconsin, use the degree day calculator at the UW Extension Ag Weather webpage:

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

To put it in perspective, following is an abbreviated list of plant and insect phenological stages in relation to GDD accumulations at which events occur (<http://www.entomology.umn.edu/cues/Web/049DegreeDays.pdf>): Ural false-spirea, first bloom, 1,170; paniced golden-rain-tree, first bloom, 1251; Rose-of-Sharon first bloom, 1347; **pine needle scale egg hatch-2nd generation**, 1349; **euonymus scale-2nd egg hatch**, 1923.

WI CROP PROGRESS AND CONDITION

Copy and paste the following link into your browser to find weather review and reports from around the state for the last week.

http://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/2015/WI_09_08_15.pdf

INTRODUCTION

The host for today's WHU was Trisha Wagner from Jackson County; PDDC Director Brian Hudelson and Insect Diagnostic Lab Manager PJ Leisch were the specialist participants. Sharon Morrissey, Consumer Horticulture Agent for UW-Extension Milwaukee County gave a presentation on Straw Bale Gardening/Small Space Gardening. Participants in today's discussions were representatives from the following counties: Brown (Vijai Pandian), Columbia County, Dane (Joe Muellenberg and Lisa Johnson), Eau Claire (Erin LaFaive), Kenosha (Barb Larson), Marathon County (Heather Schlessler), Marquette (Lyssa Seefeldt), Milwaukee (Sharon Morrissey), Outagamie (Ann Donnellan), Portage (Walt Rasmussen), Pierce (Diana Alfuth), Racine (Patti Nagai), Winnebago (Kimberly Miller).

HORTS' SHORTS

Agents report the following issues to be of interest this week:

Brown County: We had 3 confirmed cases of late blight this week in the northern and southern parts of the county. The case in the southern part of the county led to the destruction of 2000 tomato plants. The press release put out by the media has gardeners very concerned and they brought in a lot of samples. Most of those samples were affected by early blight. We had a case of SWD from a garden. We also had questions about lawn renovation such as seeding and fall application of fertilizer.

Eau Claire County: We had our first report of SWD. There was a press report about why some trees are getting their fall color early which is happening to stressed trees. Gnats are bad, but there aren't too many Japanese beetles. The weather is hot with temperatures in the 80's and 90's.

Marathon County: We are the same as most people. We are just starting to get Japanese beetles. The weather had been dry up until this week when we had some rain and some hail.

Marquette County: We are similar to Milwaukee and Kenosha. It has been pretty dry, but the cool nights and few light rains resulted in dew that is reviving the lawns. We had calls this week about winged ants (and PJ told me it was the right time of year), disposal of blighted tomatoes, and one about fruits on a squash plant grown from a grocery store squash that did not come true to type. We had a teaching moment to explain how that could happen.

Milwaukee County: Powdery mildew on squash is finally here. I had a plant turn completely white over the last week. We usually get it by mid-July to early August. There have been quite a few Japanese beetles at the Fox 6 garden. Those populations were going down, but they seem to be increasing again. There have been lots of moths, butterflies and other pollinators in the garden, as well as mosquitos. I also saw Virginia creeper with fall color and some stressed trees are prematurely showing fall color.

Kenosha County: There isn't too much to report. We have had spotty thunderstorms. We have had some "bee" calls, which turned out to be about yellowjackets. We have also had calls on weed ID, and typical fall questions about timing for dividing perennials. Other calls have been about critters like chipmunks, ground squirrels and voles making holes in lawns and garden beds. We had a sample of rust on hawthorn.

Outagamie County: We received 0.4 inches of rain. There were lots of calls about late blight because of the story on the news station and everyone has been bringing in their tomatoes. We had a case of brown rot on plum. We also had a question about soil quality and how soil is regulated in the state. Another caller wanted to know how to store carrots. We also had a report of jumping worms in a garden that was about a mile from last year's reported jumping worm case.

Portage County: We had 3 confirmed cases of late blight in the northeastern and eastern part of the county. We also saw cases of cedar apple rust on serviceberry, necrotic ring spot in turf, and people have been bringing in tomato samples with suspected late blight which have Septoria or early blight. We have had calls on flying ants. The Portage County fair is currently going on through the weekend. It has been foggy, humid, and hot.

Pierce County: We are still getting rain with several inches this week. There are lots of aphids on the milkweeds and the gnats are horrible. Apparently there is a gnat species around Eau Claire that is active all year into the fall. There have been lots of tomato questions about why they aren't red and when people suspect late blight. Other calls have been about weed, insect and plant ID. We have also had typical fall questions about pruning, dividing perennials, and treating creeping Charlie.

Winnebago County: Calls have been about controlling invasives, galls and chlorosis on trees, how to tell when apples and pears are ready to pick, and one about an evergreen disease. The report on late blight from Green Bay is causing people to panic about their tomatoes, but mostly what is affecting them isn't late blight. We have also had calls on bees and insect ID.

SPECIALIST REPORT: Insect Diagnostic Lab Update

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

- Over the weekend I got a barrage of reports about ants swarming, especially on warm sunny afternoons. These are cornfield ants, which make 3 inch diameter anthills in lawns. The swarming dies down within a week so if they get inside, just vacuum them up.
<http://bugguide.net/node/view/29186>

- Foreign grain beetles(technically a stored product pest) are 1/8” brownish beetles that are attracted to the mold on wet wood and are associated with new construction or renovation. Once the wood starts to dry out, the beetles emerge from the wall voids. They will run their course in a month or two.
- Yellowjackets and paper wasp colonies will die down with hard frosts.
- Japanese beetles are dying down.
- Milkweed seed bugs are orange and black and look kind of like box elder bugs. They don’t harm the milkweeds, but they also might wander onto other plants. I have heard of them on witchhazel, canna and other plants. I have never heard of them causing too much damage.
<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/pests-and-problems/insects/plant-bugs/milkweed-bugs.aspx>
- We aren’t getting too many reports of box elder bugs. It may be because the weather has been conducive to the fungus which keeps them in check.
- We are getting a few reports of the Western conifer seed bug. This is another fall invader and I have seen them on my screen door. <http://www.ipm.iastate.edu/ipm/iin/pinseedbug.html>

Questions/Comments

Seed Damage from Milkweed Bugs

Do milkweed seed bugs destroy the viability of milkweed seeds?

I suppose it may be possible if there were really a lot of them they may be able to impact seed viability. I have seen pods completely loaded with the bugs and the pods were still pretty full of seeds.

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

We have had a few interesting samples. We received a sample of Harry Lauder’s Walking Stick (*Corylus avellana* ‘Contorta’) with Eastern Filbert Blight. We have diagnosed verticillium on ash, oak wilt and Dutch elm disease. We also had a redbud sample that had dead man’s fingers on it. On fruit crops, we have diagnosed bacterial canker on cherry and peach, and apple and pear scab. We also got some pictures of brown rot on plum. On vegetables, we had our first confirmed case of basil downy mildew from Milwaukee County; we also saw *Cercospora* leaf blight on carrot, downy mildew on a melon from Dane County, and confirmed late blight in Brown, Dodge, Portage and Wood Counties.

Eastern Filbert Blight on Harry Lauder’s Walking Stick

This fungal pathogen causes very large scale-like spore clusters on the branches. These fruiting bodies can cause branch dieback and once you see the disease the tree will normally decline and die. It is a difficult disease to manage because it may take up to two years to see the fruiting bodies so there are a lot of unseen lesions and the infection may have progressed too far to save the tree. You can try to prune out the affected branches.

Redbud with Dead Man’s Fingers (*Xylaria polymorpha*)

The client sent the sample with a black fruiting body which turned out to be dead man’s fingers. This is a root rot pathogen which attacks stressed trees. There is a fact sheet link in this week’s PDDC summary.

Brown Rot on Plum

This fungus sporulates as a buff-colored fuzz on the fruits and causes them to mummify. It is important to pick up those mummified fruits because that is where the pathogen overwinters. It can also infect the tips of the branches and cause dieback. The pathogen can overwinter in the tips as well, so prune out any infected branches.

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

Questions/Comments

Basil Downy Mildew in Dane County

Comment from Joe Muellenberg: We have seen basil downy mildew at Eagle Heights Community Garden and a few other places.

We know it is around, but no one has brought in a sample to the clinic. Sometimes I have seen it at Allen Centennial Gardens.

Odd Fungus on Cucumber from Portage County

Did you diagnose anything further on the cucumber plant with the odd bacteria? You said you were going to send it to Amanda. We sent the sample in to check for cucumber downy mildew along with a suspected late blight tomato sample.

It was not bacteria, but a fungal pathogen called Helminthosporium. The cuke had large discrete lesions as well as some necrotic spots. The fungus is not well documented on cucurbits, but there are some old reports from Europe. We are following up on that and we will attempt Koch's Postulates to see if we can culture it and get it to infect. It certainly looked like that was the fungus from the brown spots and pattern of sporulation. The report is in the mail. The tomato had Septoria leaf spot.

SPECIAL TOPIC: Straw Bale/Gardening in Tight Places

Presented by Sharon Morrissey, UW-Milwaukee/Extension Consumer and Horticulture Agent, Coordinator of Horticulture and Urban Agriculture Program

Sharon sent five files to accompany her presentation. One is a set of slides to accompany her presentation and two files that contained fact sheets from Washington State University (WSU) Extension and West Virginia University (WVU) Extension on straw bale gardening. The information on the slide set about straw bale gardening is rudimentary. She had intended to organize all her photos but had some issues seeing the photos, so there only a few photos on the slide set. Sharon also sent two brochures that she produced; "Small Space, Small Budget Vegetable Gardening" and "Successful Container Gardening".

Straw Bale Gardening

Although Sharon has been trying out straw bale gardening for a couple of years at the Fox 6 Garden, she questions whether the information she is giving out is actually research based. There is a system worked out. At this point, Sharon asked the participants if anyone had tried straw bale gardening.

- Erin in Eau Claire County has tried it.
- Patti in Racine County has tried it in the teaching garden, the youth garden, and in her home garden.
- Kimberly in Winnebago County said that Ag Agent Darrell McCauley has done some work with straw bales and has given presentations about it.

Advantages of Straw Bale Gardening

There are some good reasons to try straw bale gardening as listed in Slide 2.

- It is a good way to put a garden where it has full sun, but there is no space for a garden. It is very portable.

- No soil or containers are needed, just the bales. The bales are inexpensive at approximately \$5/bale. Several bags of soil and the container would cost more than \$5.
- It is accessible. There is no kneeling or bending and you can sit to work on the bales. You also don't need to work the soil. It is good for people with back issues. Slide 3 shows some MGVs planting bales and they are halfway bending which isn't good, but that is not necessarily the way it has to be done.

Slide 3 shows planting the bales and the configuration used. In this case, bales are placed in a U-shape around two container grown blueberries, so there are three sides closed with bales. In the winter, the fourth side is closed in with bales to serve as winter protection for the blueberry containers and straw is put over the top.

On Slide 4, there are extension resources from WSU, WVU as well as a reference to the book Straw Bale Gardening by Joel Karsten. Sharon commented that despite the claims in the book, straw bale gardening is not totally without weeds or soil. The fact sheet produced by WVU may be a publication based on their experience but not necessarily vetted research.

Steps in Straw Bale Gardening

Slide 5 gives the steps to take when straw bale gardening.

1. Laying out the bales.
2. Conditioning the bales.
3. Planting the bales.
4. Maintenance of the bales
5. Harvest
6. End of Season tasks.

Step 1: Tips for Laying out the Bales (Slide 6)

- The ground should be mostly level. The bale we have on a slope does have some problems.
- The configuration can be anything you choose, but the bales should be placed end to end without gaps in between them. That way the bales help support each other and don't dry out as fast. T-shaped is a fine configuration. If you try to place them in a circle, you end up with wedge shaped gaps that can lead to the bales drying out more quickly and less support.
- Make sure the strings on the bales are exposed. This keeps the strings from rotting too quickly and allowing the bales to fall apart. In Slide 3 you can see what this means.
- Place the bales cut side up. When set on the end with the strings exposed, it is pretty obvious which side is the cut side. On Slide 3, the bale on the left is cut side up and the bale on the right is not. It is easier for water to penetrate the bale as well as easier to plant in the bale if the cut side is up.
- Use end posts to help support the bales, keeping them nice and tight, and also can be part of a trellising system. You can use pieces of conduit and only need two pieces of conduit for 3 bales end to end (3 is the recommended limit).
- Drip irrigation is very useful because it takes a while to soak the bales. We did have a soaker hose on upside down, but since we weren't at the garden very long we chose to water by hand. If your garden is convenient, drip irrigation is a good way to water.

Step 2: Conditioning the Bales (Slide 7)

Conditioning the bales is a critical step. Fresh straw is very high in carbon and you need to get the straw to break down to form a medium that allows water to be absorbed, to allow plant roots to penetrate, and to make the nutrients available. The conditioning process described on Slide 7 speeds up the decomposition process.

The first step is to water the bales for three days. You may see "water slides" where water comes out of the bale instead of soaking into it. You might need to poke something into the bale or move it around a little to keep the water in the bale.

The second and third steps are to add a high nitrogen fertilizer to the bails and water it in. Apply the recommended amount to each bale each day. Sprinkle the urea granules (46% nitrogen) so they migrate into the spaces in the bales. You can use organic sources of nitrogen, but keep in mind that they are not as high in nitrogen so you will need much more fertilizer. The rule of thumb is about 6 fold more than the inorganic source, but you can do the math based on the concentration of nitrogen in your source. Organic sources of nitrogen are also slower release so you will need to take that into consideration. Breakdown also depends on the moisture level and the temperature.

On Day 11, reach your hand into the bale and check the temperature. It should be slightly warm. As long as it isn't too hot, you can go ahead and plant.

Comment from Lisa: We had a MGV trying this who used blood meal and she had to use a lot of it. She said it stank to high heaven and attracted flies. Another MGV used soymeal and it stank up the neighborhood. A group of neighbors thought there was a decomposing body in woods close by and wanted to mount a search party. The organic route may need tweaking.

Question from Columbia County: What month or day is the first day you should start conditioning? Answer: That depends on when you want to plant. Bales should be ready when you are ready to plant. For peas, you want the bales ready by the second week of April. That means that you need to start conditioning 11 days before that and it is still cold then so that might impact the breakdown process. You might try it and see if the urea granules would warm it up. I don't really know.

Comment from Erin: Joel Karsten recommends doing conditioning in the fall so the bales are ready in the spring.

Comment from Patti: In the teaching garden, we use only organic nitrogen sources and we have tried quite a few. We haven't found them to be stinky or to attract flies. We have used the general organic fertilizer (by Miracle Grow), Chickity Doo Doo, and vermicompost. We have had the most success with the vermicompost either by itself or with the addition of other fertilizers. We found it takes 3-4 weeks for the conditioning process using organic methods. In my own garden, I have the most success by getting the decorative straw bales my neighbor throws out in the fall and putting them into the right orientation. I fertilize in the spring. The bales that sit over the winter give me the most success. I put them up against the rabbit fence for support and they do stay together pretty well over the winter.

Comment from Sharon: I tried planting potatoes in 1 year old bales and my arm got totally scratched up from the straw. In second year bales, one had great success and the other totally fell apart. We may try fall conditioning.

Step 3: Planting the Bales (Slide 8 and 11)

- Larger seeds and plants (Slide 8): Make a hole and fill it with soil or put them directly into the bale. Make sure there is good contact between the seed and the bale for germination.
- Smaller seed (Slide 8): Put some potting soil on top of the bales. We have had problems getting enough depth of soil to keep it from washing away so we have had limited success with that method. We found it was better to cut the bottom from a seed flat, turn it upside down, secure it with row cover pins, fill it with soil and plant in that. The sides of the flat keep the soil from washing away. Slides 9, 10 and 12 show photos of these methods.
- Transplants (Slide 11): Pull out a small chunk of the bale that doesn't go deeper than the root ball of the transplant. You don't want to pull out so much straw that there is a gap between the straw and the root ball which would lead to it drying out. You can use the chunk of straw as mulch. Or you can put some soil in the hole like it shows for the kale in Slide 8.
- Special needs crops (Slide 14): These crops work as long as you can keep the seeds moist enough and the bale is broken down enough. Potatoes work the best in 2 year old bales. Slide 15 shows a bale with potatoes. The bale on the left will be harvested on Labor Day. The plants grew beautifully, but the bale has almost fallen apart.

Step 4: Maintenance (Slide 16)

- Use a drip or soaker hose or you can hand water.
- Fertilize as for in-ground beds.

- Support for vining crops. It is difficult to put tomato cages on the bales without them falling over. It is better to set up the posts on the ends of the bales and use twine for the Florida weave for tomato or vining crop support.

Step 5: Harvest

This step is self-explanatory.

Step 6: End of Season Tasks (Slide 18)

- Sanitation is important.
- You may be able to use the bales the next year.
- If you can't reuse the bale, add them to the compost pile, use as mulch or use as a soil amendment.

Pests/Problems

Slide 17

- Slugs were a problem and you need to keep on top of that. We used Sluggo®.
- A minor irritation was the mushrooms. They were slimy and nasty but they don't cause problems.
- Oats or wheat may sprout. Joel Karsten recommends swabbing the sprouted wheat or oats with a mop soaked in vinegar. That seems questionable.

Questions/Comments

Herbicides/Chemicals Used on the Straw

Erin: Does anyone know if a chemical is used to kill the wheat or oat plant before it is cut and does that affect growing plants in that bale?

Diana: No, that isn't true. Oats and wheat are annual plants and they die. The stems are cut and the seeds are harvested. The baler cuts the straw that way when it makes the bale.

Brian: Question the source to make sure that no broadleaf herbicides were applied while the oats or wheat was growing. That would really affect plants, especially tomatoes. I have seen situations where straw was applied as mulch and residues caused issues.

Diana: Farmers seed oats and alfalfa together and use the oats as a nurse crop for alfalfa. If they oats are a cover crop, they may be treated as Brian mentioned. Depending on where you source your straw (like a garden center) you may not be able to find out if the straw was treated.

Sharon: I think people may want to know if that straw is organic. It is good to question the production of the straw.

Is Straw Bale Gardening a Fad?

Diana: Did you say that your in-ground garden was more successful?

Sharon: Yes.

Diana: That brings up the point of fads in gardening. At least it keeps people trying new things and gets them interested in gardening. We hear about the pros for new techniques, but it takes a while for the cons to show up. New things do sell books.

Sharon: Joel Karsten does it on a large scale so if he loses one plant it doesn't affect his success rate. I have 6 bales around my half whiskey barrels. You can only fit a pepper and a tomato in one bale and this year neither one did anything, so it was a total bust. People will be disappointed.

Diana: Is there any actual research going on?

Sharon: One of the fact sheets had an extension garden and a person who had been doing it for years. The agent wanted to write up his experience, but that is not really vetted research. It is kind of a fad. One of the challenges is

getting a good medium to grow on. I made these deep wells and I know there was 6 inches of empty space below the plant which had to be filled back up. There are a lot of variables.

Lisa: We provided a caller with all of the resources we had- extension publications and Joel Karsten's book, etc. The person said they followed the instructions and didn't get any produce. The person wanted more information from someone who had actually done it. I haven't tried it because I consider it a fad. The inputs of water and fertilizer seem bigger than for a container or a raised bed. I will have to tell this person I don't know anyone with great results.

Sharon: It's probably like the Topsy-Turvy and no one is selling those anymore. It sold a lot of books for Joel Karsten.

Patti: There are a huge number of variables, but I also think that certain vegetables do better in straw bales than others. From my limited experience with different kinds of straw and in different locations, squash and vining crops like zucchini do beautifully. Tomatoes, peppers, and broccoli were not as successful.

Nutrients, Run-off and Straw Bale Gardening

Diana: I would like to see some research on nutrient run-off using straw bales. The book says to water until the water runs out of the bale. I have seen straw bales on slopes and the grass downslope from the bales is super green. That run-off is hitting the gutters and storm sewers so I am concerned about that. I'd also like to see true cost analysis for the bales, posts, and fertilizer vs. a container filled with soil that could be used for many years. I don't know if it is cheaper in the long run.

Patti: I am not sure I agree with that. Even if you are reusing the soil, extra nutrients have to be applied and there is run-off from the container. Is there research for container gardening? Good productivity requires a lot of nutrients. For me, using old bales and compost, without fertilization, gave a huge production of squash. That was very heartening, but other vegetables didn't pan out. I am on the fence, but will keep trying it.

Vijai: One of the concerns with our MGVs is the watering efficiency. We don't have soaker hoses on our bales and sometimes you have to water twice a day if it is hot and dry. Some of the plants like peppers and tomatoes don't do that well. The squash do seem to be doing well. There is inconsistency on what crops do better and whether the crop has some drought tolerance.

Sharon: My bales don't seem to dry out although they have soaker hoses on them. They seem to hold water well and we only do a little hand watering once the conditioning process is done. Containers have to be watered at least twice a week. I am doing a little trial with 3 containers of petunias. I am trying soil with and without moisture granules and watering the plants the same and all of the plants have the same exposure to wind. The regular potting soil is doing very well without the moisture granules.

FINAL NOTES and ANNOUNCEMENTS

- On September 11, Diana Alfuth from Pierce County will host the last WHU of the year and there will be a season wrap-up and evaluation of WHU.
- Portage County Fair is through the Labor Day weekend. On Oct. 2 we are holding an Invasive Species Workshop. Call Denise at the Portage County extension to get registered.
- Lisa: On October 4-6, the Cut Flower Growers will hold a conference in Madison at the Sheraton Hotel. Roy Klehm, Brian, and PJ among others, will be on hand. There will also be a tour. You can find out about it at www.ascfg.org/

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: None

Vegetable Crop Update

There was no new Vegetable Crop Update Newsletter this week. Other issues are available at <http://www.plantpath.wisc.edu/wivegdis/>

Please continue to communicate new detections of late blight to me or your county agent. My lab (as well as the UWEX clinic) can offer free diagnostics and genotyping. This information is very useful in better understanding the epidemic for best management.

PDDC UPDATE

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

Brian Hudelson, Sean Toporek, Catherine Wendt, and Ann Joy

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 August 29, 2015 through September 4, 2015.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
DECIDUOUS WOODY ORNAMENTALS			
<i>Ash (Unspecified)</i>	<i>Verticillium Wilt</i>	<i>Verticillium sp.</i>	<i>La Crosse</i>
<i>Cotoneaster</i>	<i>Sphaeropsis Canker</i>	<i>Sphaeropsis sp.</i>	<i>Milwaukee</i>
<i>Elm (American)</i>	<i>Dutch Elm Disease</i>	<i>Ophiostoma sp.</i>	<i>Lake (IL)</i>
<i>Filbert (Contorted)</i>	<i>Eastern Filbert Blight</i>	<i>Anisogramma anomala</i>	<i>Dane</i>
<i>Maple (Unspecified)</i>	<i>Anthraxnose</i>	<i>Discula sp.</i>	<i>Outagamie</i>
	<i>Chlorosis</i>	<i>None</i>	<i>Outagamie</i>
<i>Oak (Bur)</i>	<i>Monochaetia Leaf Spot</i>	<i>Monochaetia sp.</i>	<i>Dane</i>
<i>Oak (Swamp White)</i>	<i>Chlorosis</i>	<i>None</i>	<i>Waukesha</i>
<i>Oak (Unspecified)</i>	<i>Oak Wilt</i>	<i>Ceratocystis fagacearum</i>	<i>Vernon</i>
<i>Redbud</i>	<i>Xylaria Root Rot/</i>	<i>Xylaria polymorpha</i>	<i>Dane</i>

	Dead Man's Fingers		
FRUIT CROPS			
Apple	Apple Scab Black Rot	<u>Venturia inaequalis</u> <u>Sphaeropsis sp.</u>	Dane, Oneida Dane
Cherry	Bacterial Canker	<u>Pseudomonas syringae</u>	Adams
Grape	Downy Mildew	<u>Plasmopara viticola</u>	Dane
Pear	Pear Scab	<u>Venturia pirina</u>	Oneida
Raspberry	Raspberry Leaf Spot	<u>Cylindrosporium rubi</u>	St. Croix
Strawberry	Common Leaf Spot Phomopsis Leaf Blight Root/Crown Rot	<u>Mycosphaerella fragariae</u> <u>Phomopsis obscurans</u> <u>Phytophthora sp.</u> , <u>Pythium sp.</u> , <u>Rhizoctonia sp.</u>	Dane Dane Vilas
HERBACEOUS ORNAMENTALS			
Hosta	Anthracnose Root/Crown Rot	<u>Colletotrichum sp.</u> <u>Pythium sp.</u>	Dane Dane
Peony	Gray Mold/ Botrytis Blight Root/Crown Rot	<u>Botrytis cinerea</u> <u>Rhizoctonia sp.</u>	Dane Lincoln
NEEDED WOODY ORNAMENTALS			
Pine (Austrian)	Diplodia Shoot Blight and Canker Dothistroma Needle Blight	<u>Diplodia sp.</u> <u>Dothistroma pini</u>	Green Green
VEGETABLES			
Basil	Downy Mildew	<u>Peronospora belbahrii</u>	Milwaukee
Carrot	Cercospora Leaf Blight	<u>Cercospora sp.</u>	Dane
Cucumber	Alternaria Leaf Blight Angular Leaf Spot Helminthosporium Leaf Spot	<u>Alternaria cucumerina</u> <u>Pseudomonas syringae pv.</u> <u>lachrymans</u> <u>Helminthosporium sp.</u>	Portage Portage Portage
Garlic	Clove Rot Embellisia Skin Blotch	<u>Fusarium sp.</u> <u>Embellisia allii</u>	Barron Waukesha
Melon	Powdery Mildew Downy Mildew	<u>Oidium sp.</u> <u>Pseudoperonospora cubensis</u>	Dane Dane
Pepper	Bacterial Spot Syringae Leaf Spot	<u>Xanthomonas sp.</u> <u>Pseudomonas syringae pv.</u> <u>syringae</u>	La Crosse La Crosse
Tomato	Black Mold Late Blight Septoria Leaf Spot	<u>Alternaria alternata</u> <u>Phytophthora infestans</u> <u>Septoria lycopersici</u>	Vernon Brown, Dodge, Portage, Wood Portage, Racine, Vernon, Washburn

	<i>Sunscald</i>	<i>None</i>	<i>Portage</i>
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For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.