

# Wisconsin Horticulture Update Summary, April 25, 2014

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## Table of Contents

<b>WI WEATHER REVIEW</b> .....	<b>1</b>
Growing degree days (GDD).....	2
<b>INTRODUCTION</b> .....	<b>2</b>
<b>HORTS' SHORTS</b> .....	<b>2</b>
<b>SPECIALIST REPORT: Insect Diagnostic Lab Update</b> .....	<b>3</b>
This week in the insect lab .....	3
Discussion: Neonicotinoids in plant production .....	3
<b>SPECIALIST REPORT: Turfgrass Diagnostic Lab Update</b> .....	<b>3</b>
<b>SPECIALIST REPORT: Plant Diagnostic Disease Clinic</b> .....	<b>4</b>
Greenhouse plants.....	4
<i>Tobacco Mosaic Virus</i> .....	4
<i>Viruses</i> .....	4
<i>Root rots</i> .....	4
<i>Edema</i> .....	5
Evergreens .....	5
<i>Spruce needle drop</i> .....	5
<i>Boxwood blight</i> .....	5
<b>SPECIALIST REPORT: Woody Ornamentals</b> .....	<b>5</b>
Winter burn on evergreens.....	5
<i>Symptoms and care</i> .....	5
<i>Prevention</i> .....	6
<b>SPECIAL TOPIC: New Woody Plants for 2014</b> .....	<b>6</b>
<b>FINAL NOTES</b> .....	<b>8</b>
<b>UW LINKS</b> .....	<b>9</b>
<b>PDDC UPDATE</b> .....	<b>9</b>
UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update .....	9

## WI WEATHER REVIEW

For the week April 14-20, 2014:

Freezing overnight temperatures stalled spring progress across much of the state. A midweek snowstorm dumped up to 20 inches of snow across the north, but warmer temperatures and rain melted the snow cover quickly. Widespread rain and snowmelt left mud and standing water.

Across the reporting stations, average temperatures last week were 4° to 7° below normal. Average high temperatures ranged from 46° to 52°, while average low temperatures ranged from 26° to 31°. Precipitation totals ranged from 0.41" in Eau Claire to 3.00" in Madison. (USDA WI Crop Progress 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<sub>mod50</sub> in Wisconsin ranged from 13.0 to 133.0. Following is a list of GDD as of April 25, 2014 for the following cities: Bayfield 13.0, Beloit 133.0, Crandon 22.0, Cumberland 37.0, Dubuque 120.0, Eau Claire 61.0, Fond du Lac 58.0, Green Bay 32.0, La Crosse 91.0, Madison 93.0, Milwaukee 58.0, Wausau 34.0. 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](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, 2<sup>nd</sup> gen. 1923**; **magnolia scale egg hatch 1938**; **banded ash clearwing borer adult emergence 2195**.

## INTRODUCTION

Today's WHU conference took place from the Dane Co. UW-Extension office, where the Extension Hort Team was holding its semi-annual meeting. The host for the conference was Erin La Favre. PDDC Director Brian Hudelson, Insect Lab manager P. J. Liesch, Turfgrass Specialist Paul Koch, Turfgrass Diagnostic Lab manager Bruce Schwieger and Woody Plants Specialist Laura Jull were special guests. Participants in today's discussions were representatives from the following counties: Brown (Vijai Pandia), Burnett/ Sawyer/ Spooner/ Washburn (Kevin Schoessow), Dane (Lisa Johnson), Douglas (Jane Anklam), Eau Claire (Erin La Favre), Jackson (Tricia Wagner), Kenosha (Barb Larsen), La Crosse (Steve Huntzicker), Marinette (Scott Reuss), Marquette (Lyssa Seefeldt), Milwaukee (Sharon Morrissey), Pierce (Diana Alfuth), Rock (Christy Marsden), St. Croix (Heidi Doering), and Waukesha (Kristin Krokowski).

## HORTS' SHORTS

Spring continued to slowly make its appearance through south and central Wisconsin, with lawns greening up, forsythia blooming, daffodils and minor bulbs popping and the beloved rhubarb emerging out of cold soils. In the northern part of the state snow was still falling, soil was frozen in many areas and the only green to be seen was dandelion foliage sunning against warm buildings.

Without doubt, the most common question heard this week has been about brown evergreens. Throughout the state homeowners have been lamenting devastating winter burn, on fine foliage (e.g.: spruce, especially dwarf Alberta spruce, pines, junipers, arborvitae), and broadleaf evergreens, especially boxwood. In close second was the question as to the timing of crabgrass preventer applications. Other concerns from homeowners were on pruning yews, controlling buckthorn, submitting soil tests and controlling indoor insects.

# 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](mailto:pliesch@wisc.edu)

## This week in the insect lab

Homeowners continued to have problems with the typically unwelcomed indoor insects seen in spring, such as multicolored Asian lady beetle and boxelder bugs. Ants, another pest found inside homes, were also a common complaint. It is important to know the identity of ant species to make proper control recommendations, since they respond to different baits.

Since the weather has warmed up and more folks tend to be outdoors, they have been observing various abnormalities on trees and fallen leaves. Galls on twigs and leaves, especially from oak, were brought in for identification. Gall insects are interesting in that they may have two- to three-year life cycles occurring in twigs and leaves.

Emerald ash borer treatment options remain a common question of concern.

Multicolored Asian lady beetle (UWEX)

[http://labs.russell.wisc.edu/pddc/files/Fact\\_Sheets/FC\\_PDF/Multicolored\\_Asian\\_Lady\\_Beetle.pdf](http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Multicolored_Asian_Lady_Beetle.pdf)

Boxelder bugs (UWEX) [http://labs.russell.wisc.edu/pddc/files/Fact\\_Sheets/FC\\_PDF/Boxelder\\_Bugs.pdf](http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Boxelder_Bugs.pdf)

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

Homeowner guide to EAB insecticide treatment (UWEX)

[http://labs.russell.wisc.edu/pddc/files/Fact\\_Sheets/FC\\_PDF/Homeowner\\_Guide\\_to\\_EAB\\_Insecticide\\_Treatments.pdf](http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Homeowner_Guide_to_EAB_Insecticide_Treatments.pdf)

## Discussion: Neonicotinoids in plant production

*There has been an increase in public concern over the use of neonicotinoids (neonics) in bedding and container plants and their impact on pollinators. Some nurseries are now selling “neonicotinoid-free” plants, bringing more attention to the pesticide use in the industry. Many growers suggest that if neonics are not used, insects such as Japanese beetle may ravage plants. Various neonics, with different levels of insect toxicity, are being used in the industry. Extension educators may wish to become aware of what local nurseries are using, and how to educate their clients about proper pesticide use*

Since neonics are widely being used, from the agricultural industry to homeowners, the impact on pollinators is a very hot topic. Research is ongoing. Some studies suggest neonics are taken up by the roots, dispersed to the leaves, and bypass the flowers, but other studies suggest the chemicals have been found in some flowers. Currently, research is being carried out on flower uptake on a plant-by-plant basis.

Dr. Dave Smitley (MSU) has written a paper to be used by educators that discusses the research being done and how to answer homeowner questions. Dr. Marla Spivak's (UMN) work on bees may also be helpful to educate homeowners.

In regards to colony collapse disorder (CCD), of all the information written, not everything is reliable. Researchers are still trying to figure it out. Papers suggest mites, viruses and stress contribute to CCD. Some suggest neonics may have some impact on the bee's susceptibility to handle stress, but they have not been able to determine the doses of the chemicals bees take in while feeding in the field, and how much may affect the insects.

Protecting bees in yard and garden (Smitley MSU):

[http://agbioresearch.msu.edu/uploads/396/52694/MSU\\_ProtectingPollinators\\_YardandGarden2.pdf](http://agbioresearch.msu.edu/uploads/396/52694/MSU_ProtectingPollinators_YardandGarden2.pdf)

Bee lab (Spivak UMN): <http://beelab.umn.edu>

# SPECIALIST REPORT: Turfgrass Diagnostic Lab Update

Presented by Paul Koch, Assistant Professor of Turfgrass Pathology [plkoch@wisc.edu](mailto:plkoch@wisc.edu) and Bruce Schweiger, Director of Turfgrass Diagnostic Lab [plkoch@wisc.edu](mailto:plkoch@wisc.edu)

Turfgrass lawns have been looking bedraggled after the long winter. A fair amount of gray snow mold has been observed, but the effect of the fungal disease on grass blades is temporary. Once temperatures warm up and turfgrass begins to grow, the problem will be resolved.

Dead turfgrass bordering driveways and walkways has been noticed throughout the state. The condition often attributed to salt burn has been seen in areas where salt has not been used. The turf burn this year appears to be due to the prolonged cold temperatures.

In regards to timing the applications of pre-emergent crabgrass control, temperatures should stay around 50° to be most effective. In the southern part of the state it is almost time to apply, but it may take a few more weeks for the northern areas to be ready.

Gray snow mold (UW) <http://labs.russell.wisc.edu/tdl/gray-snow-mold-typhula-incarnata-and-t-ishikariensis/>

Lawn establishment and renovation (UWEX) <http://learningstore.uwex.edu/assets/pdfs/A3434.pdf>

Using crabgrass preventer on your lawn (UWEX) <https://kenosha.uwex.edu/2013/04/15/using-crabgrass-preventer-on-your-lawn/>

## 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](mailto:bdh@plantpath.wisc.edu)

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

### Greenhouse plants

#### Tobacco Mosaic Virus

A petunia sample was diagnosed with tobacco mosaic virus (TMV). This virus has been a problem found in greenhouses throughout the country due to a supplier with TMV in its production facility. Diagnosticians were notified of the widespread nature of TMV in February. TMV is a very difficult problem to manage because it is transmitted by touch. After handling an affected plant, the virus can be spread to other plants simply by brushing against them. Once TMV infects a greenhouse, it is extremely difficult to eradicate, and decontamination is required.

The symptoms on plants seen in the lab have been very distorted growth, blotchy coloring, and in this instance, interveinal yellowing.

Commercial growers may test for TMV in-house using test strips from Agdia (<http://www.agdia.com>). The ImmunoStrip dipsticks are easy to use. Plant tissue is placed in a buffer solution, ground with mesh and sap is collected for testing. The dipstick will readily reveal colored lines if positive.

TMV 2014 (E-gro Alert) <http://e-gro.org/pdf/3-15.pdf>

Common questions and answers about TMV (MSU)

[http://msue.anr.msu.edu/news/common\\_question\\_and\\_answers\\_about\\_tobacco\\_mosaic\\_virus](http://msue.anr.msu.edu/news/common_question_and_answers_about_tobacco_mosaic_virus)

#### Viruses

An increasing number of viruses are being brought in on imported ornamental plants, with Holland having quite a few problems. Anecdotal evidence from one state's imports suggests approximately 25% of the plants coming from Holland were found to be infected with viruses.

Viruses in imported and domestically produced ornamentals (forestry images)

<http://www.forestryimages.org/browse/Archivethumb.cfm?Arc=8>

#### Root rots

More plant submissions from greenhouses have indicated root rots due to overwatering.

Root rots on houseplants (UWEX) [http://labs.russell.wisc.edu/pddc/files/Fact\\_Sheets/FC\\_PDF/Root\\_Rots\\_on\\_Houseplants.pdf](http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Root_Rots_on_Houseplants.pdf)

## Edema

Geranium, a plant commonly seen affected with edema, is being tested in the lab. The disorder is often seen in cool greenhouse production, where plants suffer an imbalance between water being taken up by the root system and being released through the leaves. The plant responds by pushing cells out of the leaf surface, which turns brown and crusty. In severe cases there will be extensive leaf browning.

*Edema on spring crops (U Mass)* <https://extension.umass.edu/floriculture/fact-sheets/edema-spring-crops>

*Edema (UWEX)* [http://labs.russell.wisc.edu/pddc/files/Fact\\_Sheets/FC\\_PDF/Edema.pdf](http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Edema.pdf)

## Evergreens

### Spruce needle drop

Many conifer problems seen so far this year have been related to environmental stresses. One interesting example is spruce needle drop (SNEED), a disorder most often associated with stress. Although SNEED has been referred to as a “fungal disease”, the organism associated with the condition has never been demonstrated to be a true pathogen; no one has been able to inoculate plants with the fungus and reproduce symptoms. It is not clear if stress is causing dieback and the fungus takes advantage of the weakened conditions, or if the fungus is a contributing factor, predisposing the plant to be more susceptible to infection. If it is a pathogen it is working as a canker organism, girdling stems, causing tip dieback and resulting in needle loss. The needle loss and dieback from SNEED may occur in random patterns and may affect any type of spruce, although blue spruce is more often affected. The fungus is fruiting and sporulating this time of year, so it is a good time for microscopic diagnosis. Higher than normal SNEED occurrences this season may be attributed to the drought of 2012 and late 2013 along with the harsh winter.

*New disorder of spruce in Illinois: Sudden needle drop of spruce (UI)* <http://hyg.ipm.illinois.edu/article.php?id=282>

### Boxwood blight

Boxwood has undoubtedly suffered extensive winter burn this year. However, a disease affecting boxwood could possibly be misdiagnosed and attributed to winter burn if not examined. Boxwood blight is a devastating fungal disease found in the eastern U.S., but not yet Wisconsin. It presents with discreet necrotic spots on the leaves and as it progresses it will cause branch dieback. Suspicious cases will be tested by the PDDC for free. It is important to find any cases if they exist in the state. Other causes for branch dieback on boxwood are animal chewing and Verticillium wilt.

*Boxwood blight (ANLA)*

<http://americanhort.theknowledgecenter.com/OnDemand/index.cfm?view=category&colid=142&cid=324>

## SPECIALIST REPORT: Woody Ornamentals

Presented by Laura Jull, Assistant Professor and Extension Woody Ornamentals Specialist [lgjull@wisc.edu](mailto:lgjull@wisc.edu)

### Winter burn on evergreens

Environmental conditions during the winter of 2013-14 have caused an extraordinary amount of winter burn on narrow-leaved and broadleaf evergreens. Although temperatures were normal for a zone 4 to 5 Wisconsin winter, it was an exceptionally long period of cold, with much wind and sun contributing to burn.

#### Symptoms and care

##### *Evergreens with no latent (dormant) buds on stems*

Evergreens that have no new growth buds along the stems will not produce any new green growth on other than at the branch tips (if they are alive). Burnt needles will not recover and only growing tips may put out green growth.

Junipers, false cypress

Prune out entire dead branches.

## Spruce

On spruce all the brown needles will fall off, with new growth only occurring from the branch tips.

Dwarf Alberta spruce, although very cold hardy, is very susceptible to winter burn. Unless kept in a protected location and kept moist, it is not uncommon for it to burn when winter conditions are right. Due to its dense habit, this plant may look quite unsightly with extensive needle death and should be considered for removal if winter burn is severe.

## Pine, fir, Douglas fir

Pines affected by winter burn this year seem to have been damaged on only one side of the tree. The brown needles will fall off. New needles will flush out only from the candles at the tips of the branches, if the tips are alive. Pines will hold needles for a few years, depending on the species. White pines hold needles for a several years and some pine species may retain needles for up to fifteen years. Fir and Douglas fir will green up only from branch tips.

## *Evergreens with latent buds on stems*

Although winter burned leaves will fall off, evergreens with healthy existing latent buds, the growing points along the stems, will be able to grow new leaves.

## Arborvitae, yew, hemlock, boxwood

The brown needles will not recover and turn green but healthy, latent buds will flush new growth in spring. Wait for the new growth to see how far back along the stem it occurs. Prune out the dead material above the new growth. A scratch test of the stem may indicate if the stem is alive.

## Prevention

### *Antidessicants*

Antidessicant products need to be applied before harsh environmental conditions occur. They may wash off with rain and snow and will need to be reapplied periodically. They may clog stomates.

### *Wraps*

Wind barriers are effective when wind is deflected away from plants. Construct frames to attach barrier fabric; do not wrap plants with fabric touching them.

### *Irrigation*

Water evergreens well before winter sets in. Lengthy periods of frozen soil may prevent plants from taking up water.

*Winter burn on Minnesota's evergreens (UMN)* <http://blog.lib.umn.edu/efans/ygnews/2014/03/winter-burn-on-minnesotas-ever.html>

# SPECIAL TOPIC: New Woody Plants for 2014

Presented by Laura Jull, Assistant Professor and Extension Woody Ornamentals Specialist [lgjull@wisc.edu](mailto:lgjull@wisc.edu)

Following are comments made to the ppt presentation and extended detailed plant list found on the WHU website for April 25, 2014 <http://fyi.uwex.edu/wihortupdate/2014/04/21/april-25-2014-newexciting-woody-ornamentals/>

The photos in the ppt presentation may not be downloaded or shared.

Note: The plants described in the presentation are new introductions. They have not been fully trialed in Wisconsin, and therefore cannot be recommended to be hardy or feature the characteristics as described.

New plant introductions may come from a variety of sources, such as natural chances to very deliberate breeding programs. New plants may be discovered by an astute gardener or by specialty breeders at a large nursery. For example, a green and yellow variegated grey dogwood was discovered by local Wisconsin nursery, McKay's, is now being propagated, and will be hopefully introduced in the trade in a few years.

The new introductions in the presentation, not tested in Wisconsin, will have to withstand harsh winter conditions to survive here. Winter hardiness is always a consideration for northern states. According to the 2012 USDA zone map, eastern Wisconsin is in zone 5b, south-central areas away from Lake Michigan are 5a, much of the remainder is in zone 4, and a section of the northwest is in zone 3.

Following are a few highlights of this year's introductions:

#### Trees

Arctic Jade® maple, a hybrid of Korean and Japanese maples, has the hardiness of Korean maple but the deeply dissected leaves of Japanese maple, and resembles a fullmoon maple. In Oregon the fall color is reddish orange.

North Wind® maple is another Korean-Japanese maple hybrid. Although the leaves are not as deeply dissected as Arctic Jade™, the fall color is intense. New growth is orange throughout the growing season. These hybrids are hardy to zone 4b, as is Wisconsin bred Northern Glow® maple, but the form of Arctic Jade™ and North Wind™ are better.

Pattern Perfect® tatarian maple is extremely hardy to zone 3, and very adaptable. Best used in difficult urban situations where space may be constrained, soil is poor and conditions so miserable nothing else will survive, this tree has not been tested for invasiveness. Amur maple, a subspecies of tatarian maple has been found to be quite invasive. As with other maples, this tree is susceptible to Verticillium wilt.

Parkland Pillar™ Asian white birch is extremely tight, 40' high by 6' wide. As with other white birches, it is not borer resistant.

Emerald Avenue® European hornbeam has very thick, pleated leaves, making it more heat tolerant than the native hornbeam. The fall color is yellow and the bark, as with other *Carpinus*, is smooth grey.

First Editions® 'Centennial Blush' Magnolia has very fragrant, pom-pom type pink flowers.

First Editions® Gladiator™ crabapple is purported to be disease resistant and drought tolerant, but has not been tested in Wisconsin. Crabapples generally require significant pruning during their lifetime to keep them open for good air circulation.

Parrotia were never considered particularly hardy in Wisconsin, but they have been growing well in the zone 5 areas of the state. Persian Spire™ parrotia is an exciting introduction, having purple edged leaves and red stamened flowers in spring. The fall color is a riot of bright colors. The bark is mottled and exfoliates when mature. This introduction grows very fast from cuttings.

The Silverwood™ American sycamore features very white bark for the species. It has not been trialed in Wisconsin. It is not known if it is susceptible to anthracnose here.

The Javelin™ pear was bred at NCSU. The spring growth is reddish purple, maturing to bronze-green. It is very fire blight resistant.

#### Shrubs

Barberries continue to be bred for various characteristics, but many of the plants in the species are very invasive. Newer barberries will usually note if they have low seed count, low viability seed, or are sterile. First Editions® Limoncello™ Japanese barberry does not indicate its fertility rate.

Butterfly bushes are considered invasive plants in much of the country, but in Wisconsin, winter hardiness is a limiting factor for survivability at all. If butterfly bush is desired in the landscape, consider planting it in a container and store it in an unheated building over winter. True Blue™ features silvery leaves and is purported to have low seed count. Lo and Behold® 'Blue Chip Jr.' and 'Pink Micro Chip' are compact, seedless butterfly bush with strong stems. Breeder Dr. Dennis Werner of NCSU is working on producing sterile ornamental plants to reduce invasive

tendencies.

Bailey Select purpleleaf American hazelnut is one of the few purple native hazelnuts; most others are of the European species. The leaves remain purple all summer. American hazelnuts are delicious edibles.

Although deutzias are marginally hardy in Wisconsin, only to 5b, Yuki Cherry Blossom™ and Nikko Blush may be worth trying for their unusual characteristics. Yuki Cherry Blossom has light pink flowers instead of the typical white, but it also has unique burgundy fall color. Nikko Blush blossoms have a pink pinstripe on the backside of the flowers.

First Editions® Lotus Moon™ pearlshrub is exceptionally hardy for the species to zone 4b. It features beautiful flowers over the entire stem, not just at the tips.

Many new rose-of-Sharon are being released, but they are all Japanese beetle magnets. If the beetle is not a problem in your area, Blueberry Smoothie™, Strawberry Smoothie™, Peppermint Smoothie™ and Raspberry Smoothie™ are worth trialing for their lovely colors. Names have become a very important marketing feature for new plants.

Lil' Annie™ is a cultivar of our native hydrangea and should be hardy to much of the state. This plant features more flowers on stronger stems than the species. Lime Rickey™ has blooms staying green longer than the species and eventually turns white, then brown as the season progresses.

Bigleaf hydrangeas have not been very successful in Wisconsin, but new varieties are being released every year. At McKay Nursery in Madison, there is hope for a reliable bloomer on new wood, featuring bright fuchsia flowers; it may be released in a few years. The *H. macrophylla* types introduced this year have not been trialed in Wisconsin. Endless Summer® Bloomstruck™, bred by Michael Dirr, is exciting because it is supposed to be heat tolerant, disease resistant, have bright red stems and unusual burgundy fall color.

Panicked hydrangeas are generally hardy to zone 4a, but the species are large plants. New selection Magical® Candle is approximately 5' by 5', and First Editions® Strawberry Sundae®, a sport of popular Vanilla Strawberry™, is 4-5' by 3-4'.

## ANNOUNCEMENTS

### Responding to Horticultural Inquiries

The 2014 Responding to Horticulture Inquiries will feature update sessions, an "Answering Horticultural Inquiries in County Offices" session and more. These will be open to UW-Extension agents, educators, office staff and plant health advisors. RSVP Brian Hudelson. <http://fyi.uwex.edu/wihortupdate/2014/04/19/responding-to-horticulture-inquiries-2014/>

The program will be offered the following locations:

- **Dane Co. Olbrich Botanical Gardens** May 1, 2014, 8:30 AM – 4:30 PM
- **Brown Co., Brown Co. Extension Office, Green Bay** May 22, 2014, 8:45 AM – 4:55 PM
- **Eau Claire Co., Expo Center** May 28, 2014, 8:45 AM – 4:45 PM

### Master Composting Instructors Workshop

May 3 in Superior, WI. Contact Jane Anklam for further information <http://douglas.uwex.edu/2014/04/09/master-composting-instructor-workshop-2014/>

### Commercial Food Service Waste Recovery Roundtable

May 2. Contact Jane Anklam (see above) for more information.

## FINAL NOTES

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 <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/>

## PDDC UPDATE

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

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, 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 April 19, 2014 through April 25, 2014.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
<b>HERBACEOUS ORNAMENTALS</b>			
Geranium	<a href="#">Pythium Root Rot</a>	<i>Pythium</i> sp.	Waushara
Petunia ('Wild Plum')	Tobacco Mosaic	<i>Tobacco mosaic virus</i>	Dane
<b>NEEDED WOODY ORNAMENTALS</b>			
Spruce (Unidentified)	Spruce Needle Drop	<i>Setomelanomma holmii</i>	Chippewa

For additional information on plant diseases and their control, visit the PDDC website at [pddc.wisc.edu](http://pddc.wisc.edu).