

Wisconsin Horticulture Update Summary April 26, 2013

Table of Contents

WI WEATHER REVIEW	1
Growing degree days (GDD).....	1
INTRODUCTION	2
HORTS' SHORTS	2
SPECIALIST REPORT: Plant Diagnostic Disease Clinic	2
SPECIALIST REPORT: Wacky Weather Woes	3
2012 WI Gardening in Review.....	3
Drought-tolerance Winners and Losers.....	3
Spring 2013	3
2013 Growing Forecast.....	3
Preventing Wildlife Damage.....	3
Sunscald.....	4
ANNOUNCEMENTS	4
Responding to Horticultural Inquiries.....	4
FINAL NOTES	5
UW links	5
PDDC Update	5

WI WEATHER REVIEW

For the week ending April 22, 2013

It was another soggy, frigid week in the state; some areas of northern Wisconsin received significant snowfall while cold rain fell in the south. Temperatures and growing degree days were well below average. Maple syrup season was winding down with excellent sap production.

Across the reporting stations, average temperatures last week were 3° to 12° below normal. Average high temperatures ranged from 40° to 51°, while average low temperatures ranged from 26° to 35°. Precipitation totals ranged from 0.79" in Green Bay to 2.93" in Milwaukee. (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_{mod50} in Wisconsin ranged from 5.1 to 77.5. Following is a list of GDD as of April 26, 2013 for the following cities: Bayfield 5.1, Beloit 77.5, Crandon 7.1, Cumberland 8.5, Dubuque 60.5, Eau Claire 10.5, Fond du Lac 22.5, Green Bay 13.4, La Crosse 19.2, Madison 40.8, Milwaukee 27.1, Wausau 8.6. 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 33; 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; common ninebark first bloom 507; **bronze birch borer adult emergence 550**.

INTRODUCTION

The host for today's WHU was Scott Reuss, UWEX Crops/Soils/Horticulture Agent, Marinette Co. PDDC director Brian Hudelson and Woody Ornamental Specialist Laura Jull were guests. Participants in today's discussion were representatives from the following counties: Brown (Vijai Pandian), Eau Claire (Erin LaFavre), Florence/ Marinette (Scott Reuss), Jackson, Kenosha (Barb Larsen), La Crosse (Steve Huntzicker), Milwaukee (Sharon Morrissey), Waukesha (Kris Krokowski), and Winnebago (Kim Miller).

HORTS' SHORTS

Agents report the following issues to be of interest this week: Crocuses and minor spring bulbs were blooming in almost all reporting counties, grass was greening up, but no blooms were yet observed on Forsythia, a noticeable phenological indicator, in any county, including the southernmost. With a promising forecast of higher temperatures across the state for the next week, everyone is anxiously awaiting budbreak and blooming of early flowering trees, shrubs, and perennials. In the northernmost parts of the state, however, twelve inches of snow may be doing a quick melt over frozen soils doing in the next few days, creating flooding conditions. Soil temperatures in Marinette Co. this week were in the mid 30s, Brown was 49°, and Milwaukee showed 39 – 41°. Drive-by observations of dying and dead conifers, especially pine, along roads and highways were noted, possibly due to last year's high heat and drought.

Homeowners have been calling in with concerns about dead patches in lawns; application timing for crabgrass preventative; rabbit and vole damage on woody ornamentals and fruit trees; heavy squirrel spruce tip pruning; and woodpecker activity on houses. In the commercial setting, downy mildew in greenhouse plants has been a problem.

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) bdg@plantpath.wisc.edu

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

Optimistic of spring's arrival in Wisconsin, Dr. Hudelson reported his drive-by sightings of blooms on the way to southern Illinois this past week, where Amelanchier were blooming, trees leafing out, and Magnolia species flowering or already dropping petals.

The Clinic received a sample of *Rhizosphaera* on spruce and another of spruce tips nipped off by squirrel.

Expectations for the upcoming season will be to see more needle loss on conifers, probably in combination with *Rhizosphaera*, with drought stress carryovers from 2012.

Special information on downy mildew has been posted on the WHU website:

<http://fyi.uwex.edu/wihortupdate/>

Rhizosphaera Needle Cast (UWEX):

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

Red Squirrel Injury to Spruce Trees in Winter (MSU):

http://msue.anr.msu.edu/news/red_squirrel_injury_to_spruce_trees_in_winter

SPECIALIST REPORT: Wacky Weather Woes

Presented by Laura Jull, Associate Professor, Woody Ornamental Specialist lgjull@wisc.edu

2012 WI Gardening in Review

2012 may have been one of the worst years to garden. With the premature spring arriving in March, followed by a blustery, wintery April, plants that had budded, leafed out or flowered were devastated by freezing temperatures. Tender vegetative growth and flowers were killed on most plants; apple and cherry yields were reduced drastically. May, and traditionally wettest month June, were excessively dry. Trees planted in 2011 and 2012 struggled to get established if no additional watering was applied. Exceptionally high temperatures during the summer baked plants to death with the hot sunrays. Dwarf conifers, in particular, were scorched on top even though their rootballs were moist. Watering became a daily duty to keep plants alive, and some established trees required extra watering.

Drought-tolerance Winners and Losers

The drought of 2012 was an excellent opportunity to test species for heat and drought tolerance. Some plants that did not do well were the Japanese Tree Lilac, a species regarded as an excellent urban tree, but which struggled so badly nurseries could not sell them last year; hydrangeas, known to be water-lovers, vanquished in the drought; roses plummetered with rust and Japanese beetles gave up in the heat; many exotics also suffered extreme stress or perished. Plants that did well last year were established Junipers and Oaks, the purple-leaved Eastern Ninebark; Black Chokeberries, Sumac, Diervilla, the native St. John's wort; Russian Sage and many of the ornamental grasses. Last summer's drought- successful plants should be considered for more garden plantings, especially in water-restricted areas, and for commercial landscape plantings. No species, however, should be considered drought tolerant until they have established their root systems; for trees that may take 3-5 years, shrubs 2-3 years.

Spring 2013

The April 22, 2013 Wisconsin Crop Manager Condition and Progress Report provided maps indicating the vast variation in precipitation in the state, from Oct. 1 to the present. In the southeast part of the state, precipitation was significantly above normal, but in north and north central parts, it was as much as 6"-8" below normal; along the Bay in Marinette Co., 2"-4" above normal; in inland Florence Co., 4"-6" below normal.

Spring, slow to appear this year and phenologically behind normal, found Forsythia, Amelanchier, and Magnolia not yet blooming this week, although usually in full flower at this time. The gentle progression poses well for a beautiful May with everything possibly coming into bloom at around the same time.

WI Crop Manager and Progress Report (USDA):

http://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/index.asp

2013 Growing Forecast

The forecast for 2013 is questionable, but it has been suggested that repercussions from last year's drought may include an increase in borer activity, canker diseases, and conifer mortality, especially among drought-sensitive arborvitae. Drought tolerant weeds, such as thistle and dandelion, proliferated last year, possibly increasing their populations this year.

The wet weather this spring may cause an increase in root rots. On the good side, the prolonged, cool spring this year has coaxed plants gently out of winter dormancy, and hopefully will provide an exceptional bloom display and good fruit production.

Long Term Drought Effects on Trees and Shrubs (UMASS): <http://extension.umass.edu/landscape/fact-sheets/long-term-drought-effects-trees-and-shrubs>

Effects of Flooding on Woody Landscape Plants (UWEX): <http://learningstore.uwex.edu/Assets/pdfs/A3871.pdf>

Preventing Wildlife Damage

Q. Throughout the state, and especially in Marinette Co., there was prolonged and significant ice and snow cover predisposing plants to wildlife damage. Please give us some advice on how to prevent damage in the future.

A. Reports of deer, vole and rabbit damage were heavy this year, but especially from vole and rabbit. Reports of rabbits eating Burning Bush bark were so frequent that damage has almost become an identification feature for that plant. However, because Burning Bush is considered an invasive plant, this may have been nature's way of controlling its spread. If damage were confined to a tree or shrub tips, that would be considered cosmetic in most cases; but if rabbit or vole chewed the bark, exposing the xylem and phloem, the plant may not recover. To control rabbit or vole damage, exclude the animal by fencing with a heavy hardware mesh to a height of three feet. For serious deer feeding, especially on fruit trees, deterrent sprays can be tried but must be reapplied to be effective. Exclusion by fencing or using barking dogs may be more effective.

Internet Center for Wildlife Damage Management: <http://icwdm.org/handbook/index.asp>
Wildlife Ecology and Damage Management (UWEX): <http://wildlifedamage.uwex.edu>

Sunscald

Q. *As a comment to last year's heat and drought, here in Brown Co., both Crabapple and Amelanchier were badly affected, looking shabby early in the season. Amelanchier, especially if planted in sun, turned fall color in the middle of summer.*

Surprisingly, there have been no calls about sunscald to our office; have you seen any cases in homeowner properties or nurseries during your travels around the state?

A. No, even at the nurseries, sunscald has not been a concern. Sunscald occurs as the sun heats up a side of a tree and cooks the bark off. Research by Bob Miller at UW-Stevens Point reflects that sunscald is a condition often brought on by poor culture such as improper pruning, flush cuts, root injury or drought stress. Some species may be more susceptible to sunscald, such as Mountain Ash, Honeylocust, young Norway Maple, and a number of fruit tree.

To prevent sunscald, when planting a nursery grown tree, look for a paint mark on the trunk and face that southwest; many nurseries mark their trees on the southwest side. Avoid deep planting. Mulch trees properly, keeping mulch off the trunk so moisture on the trunk does not cause bark dieback. If the bark is kept too wet and wood-rotting fungi move in, the side of the tree affected will lose bark, looking like sunscald injury.

Using tree wrap to prevent sunscald or freeze crack injury may be more of a problem than a preventative cure. Research suggests that tree wrap causes the bark to keep warm, creating an environment for insects and tree pathogens to proliferate under the wrap material.

Wisconsin Crop Manager Progress and Condition Report:
http://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/index.asp
Frost Cracks and Sunscald: Bad Weather or Bad Management:
<http://dnr.wi.gov/topic/UrbanForests/documents/VOL10NO3.PDF>
Factors Predisposing Urban Trees to Sunscald: <http://joa.isa-arbor.com/request.asp?JournalID=1&ArticleID=2936&Type=2>

ANNOUNCEMENTS

Responding to Horticultural Inquiries

The 2013 Responding to Horticulture Inquiries will feature update sessions with Brian Hudelson, Phil Pellitteri and Mark Renz, an "Answering Horticultural Inquiries in County Offices" session and a hands-on plant ID, insect ID, and disease ID session. These will be open to plant health advisors and county office staff. Program schedule: <http://fyi.uwex.edu/wihortupdate/2013/04/15/responding-to-horticulture-inquiries-2013/>

The program will be offered the following locations:

- **Racine County** May 8, 2013 9 AM – 5 PM, Town of Norway Town Hall, 6410 Heg Park Rd., Wind Lake, WI 53185
- **Iowa County** May 23, 2013 9 AM – 5 PM, Iowa County UW-Extension, 303 W. Chapel, Dodgeville, WI 53533
- **Marathon County** May 30, 2013 9 AM – 5 PM, Marathon County UW-Extension, 212 River Dr., Wausau, WI 54403

Please contact Brian Hudelson (608-262-2863 or bdh@plantpath.wisc.edu) by May 1, 2013 to reserve a spot or if there are questions.

FINAL NOTES

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

UW links

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://fyi.uwex.edu/weedsci/>

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

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, Andrew Pape, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant samples from around the state. The following diseases/disorders have been identified at the PDDC from April 20, 2013 through April 26, 2013:

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
NEEDED WOODY ORNAMENTALS			
Spruce (Norway)	Squirrel Branch Pruning	None	Ozaukee
Spruce (Unidentified)	Rhizosphaera Needle Cast	<i>Rhizosphaera kalkhoffii</i>	Ozaukee

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