

# Wisconsin Horticulture Update Summary, September 05, 2014

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# WI WEATHER REVIEW

The weekly weather review from the WI Pest Bulletin is done for the year.

## Growing Degree Days (GDD)

Growing degree days is an accumulation of maximum and minimum temperatures as directly related to insect and plant development. As of September 05, 2014 in Wisconsin, the GDDmod 50 ranged from 1430 to 2532: Appleton-2045; Bayfield-1430; Beloit-2532; Big Flats-2189; Crandon-1620; Crivitz-1804; Cumberland-1936; Eau Claire-2227; Fond Du Lac-2069; Green Bay-1929; Hancock-2189; Hartford-2063; Juneau-2183; LaCrosse-2467; Lone Rock-2490; Madison-2362; Medford-1773; Milwaukee-2025; Port Edward-2107; Racine-2049; Sullivan-2063; Waukesha-2063; Wausau-1846. To determine the Degree Days of any city in Wisconsin, use the Degree Day calculator at

[http://agwx.soils.wisc.edu/uwex\\_agwx/thermal\\_models/many\\_degree\\_days\\_for\\_date](http://agwx.soils.wisc.edu/uwex_agwx/thermal_models/many_degree_days_for_date)

The following phenological information gives a perspective on how GDD accumulation relates to some plant and insect development ( <http://www.entomology.umn.edu/cues/Web/049DegreeDays.pdf> and [http://www.ipm.msu.edu/agriculture/christmas\\_trees/gdd\\_of\\_landscape\\_insects](http://www.ipm.msu.edu/agriculture/christmas_trees/gdd_of_landscape_insects) ): Northern pine weevil-2nd adults active-1200; Pales weevil-2nd adults active-1200; Pine root collar weevil-2nd adults active-1200; White pine weevil-2nd adults active-1200; Fall webworm caterpillars feeding-1200; Beech scale-egg hatch, 1st crawlers-1250; Panicked Goldenraintree-first bloom-1251; Pine needle scale-2nd generation egg hatch-1250; Elm leaf beetle-2nd generation-1300; Rose-of Sharon-firstbloom-1347; American plum borer-2nd generation-1375; Pine needle scale-2nd generation-hyaline stage (control target)-1500; Cooley spruce gall adelgid-2nd adults active (control target)-1500; Eastern spruce gall adelgid-2nd adults active (control target)-1500; Walnut caterpillar egg hatch, caterpillars-1600; Zimmerman pine moth-adult flight 1700; Arborvitae leafminer-3rd generation-1700; Banded ash clearwing borer-adult emergence-1800-2200; Fall webworm-tents become apparent-1850; Euonymus scale-egg hatch - 2nd generation-1900; Magnolia scale egg hatch-1925.

## INTRODUCTION

Today's WHU host was Walworth County horticulture educator Chrissy Wen. Insect Diagnostic Lab Manager P.J. Leisch and PDDC director Brian Hudelson were on well-deserved vacations. The special guest this week was Mark Dwyer of Janesville's Rotary Gardens discussing "Bulbs for Spring Color". Other discussion participants were representatives of the following counties: Brown (Vijai); Kenosha (Barb); LaCrosse (Steve); Portage (Walt); Rock (Christy); Winnebago (Kimberly); Pierce (Diana).

### Hort's Shorts

County agents reported similar issues across the state.

Brown: We got 2.5 inches of rain. Questions this week were on early blight on tomatoes as well as issues with poor yield on fruit trees likely due to weather in 2012 and 2013, weed control in lawns, and bees and wasps.

Portage County: Spotted Wing Drosophila likely but not yet confirmed. We had more than an inch of rain. We had questions on plant and weed ID and a report of a puffball mushroom that was 12 inches high and 46-48 inches in circumference. That is not a world's record but pretty big!

Winnebago County: We had lots of rain. Our calls are across the board from ID questions to dieback on trees. We are starting to get questions about EAB as people realize it is in our county.

Rock County: We had a good rain. We did not have a lot of tree questions this week compared to the previous few weeks, but insect and EAB questions were common. We had some insect questions, especially ones that want to nest in inappropriate places.

Kenosha County: We had questions about Septoria on tomato, but no EAB questions at our fair. People did wonder why oaks were dropping leaves so early.

La Crosse County: We didn't have nearly as much rain as we missed out on some of the storms which went north and south of us. We are seeing fungal diseases with the moisture, but vegetables are coming on now. We had a lot of insect ID questions and some questions about insects on tomatoes.

Pierce County: We had more than 6 inches of rain this past week. There has been no browning of lawns and we are seeing lots of mushrooms due to the wet season. Tomatoes are finally coming in gangbusters. Maples are showing early fall color, possibly due to stress.

Walworth County: We are seeing similar issues as Christy. People have brought in insects and spiders that are coming into their homes. I am seeing oaks dropping leaves already. EAB questions are still coming in. Our rain has been adequate so everything looks good. We are seeing Septoria on tomatoes. We just completed our county fair where we had all sorts of random questions at our horticulture booth.

## **SPECIALIST REPORT: Insect Diagnostic Lab Update**

*Presented by P. J. Liesch, Associate Researcher, UW-Madison Department of Entomology, and Manager of the UW-Extension Insect Diagnostic Lab [pliesch@wisc.edu](mailto:pliesch@wisc.edu)*

There was no Insect Diagnostic Lab update this week.

## **SPECIALIST REPORT: Plant Diagnostic Disease Clinic**

There was no Plant Disease Diagnostics Clinic (PDDC) update this week.

## **SPECIAL TOPIC: Bulbs for Spring Color**

*Presented by Mark Dwyer, Director of the Janesville Rotary Gardens*

### ***Introduction***

Mark sent a listing of the slide descriptions as well as a powerpoint to accompany his presentation and he hopes that people can see the beautiful color slides.

Rotary Gardens is celebrating their 25<sup>th</sup> anniversary this year. Impatiens downy mildew has been a problem this year and 5000 plants were removed due to the disease, but they still do have a lot of color. Come visit!

They are in the midst of their fall plant sale, including bulbs from the Netherlands. Even though it is the end of the season and gardening activities are winding down, bulbs give the promise of spring. Sadly, fifty percent of the bulbs purchased are never planted since folks are burning out on garden work at this time of year.

### ***Obstacles to Planting Bulbs***

Even though swaths of bulbs can be spectacular as shown in the slide of Keukenhof's gardens at peak bloom, there can be some obstacles. The expense of bulbs, planting them and wildlife damage before and after growth emerges are all issues that make people reluctant to plant bulbs. We have a rampant deer and rabbit population and suffer quite a bit of damage.

### ***Definition of a Bulb***

A true bulb is a rounded, underground storage organ consisting a short stem surrounded by fleshy modified leaves that stays dormant over winter. Other fall-planted structures may be tubers, rhizomes, or corms. All of these storage organs are geophytes.

"Poised and Ready" describes the wide variety of plants available for fall planting. Some shown in the image are not hardy in our area, but there are many offerings at garden centers and through mail order.

### ***Benefits of Bulbs***

The most obvious benefit of bulbs is beauty. However, they can also expand the season of bloom providing early color, provide companion plants until other plants peak, and provide a nectar source for early pollinators. At Rotary

Gardens, we have 400,000 bulbs which bloom from March all the way through July. Bulbs do not have to be planted in drifts but can fill in gaps while other plants emerge and be one part of the garden palette. We see bees in March and early April taking advantage of the early bloomers on warm sunny days.

The slides showing images of the beautiful show you can expect if you plant bulbs and capture the color drifts found in plantings in the Netherlands where 6 million bulbs are planted.

### ***Drawbacks of Bulbs***

The expense may be a big drawback. Another problem may be finding space in your garden, but you can identify gaps in the spring. We take many pictures so we can remember where we want to plant in fall. You will be rewarded in spring.

### ***Bloom Windows***

Weather influences the show. There was a 6-8 week difference in bloom time between the warm droughty year of 2012 and the cool spring of 2013. This year, our tulips bloomed 3 weeks later than normal.

### ***Planting Bulbs***

**Timing:** October is the ideal time to plant bulbs, but you can plant through November or before the ground freezes. We have had donations very late in the season and if we can get a shovel in the ground, we will plant. We managed to plant a 40,000 daffodil bulb donation in January by removing soil and storing it where it couldn't freeze, filling the holes with straw, then planting and filling with our saved soil.

**Planting Depth and Spacing:** The usual recommendation is to plant the bulb at a depth three times the height of the bulb. For example, a tulip bulb which is about two inches high, should be planted six inches deep. Three inch daffodils may require nine inches, and grape-sized bulbs may only require two to three inches. The planting depth is measured from the bottom of the bulb.

For spacing, it easier to plant numerous bulbs in a big hole and it gives more impact with a bouquet effect. Tighter spacing is fine, as long as the bulbs do not touch each other in the hole. Rot is a possibility if they are touching and all the bulbs can then succumb. For high impact bulbs, such as tulips and hyacinths, we plant five bulbs/sq. ft. and it takes less time. Trying to stretch your display by spacing bulbs too far reduces their impact. We do use more conservative spacing for daffodils and leave more room for their offsets, as they will fill in over time.

**Fertilization:** We fertilize at planting time and at bulb emergence. Do not fertilize during blooming. Some people fertilize late, but we don't have the budget for that. We use Milorganite to fertilize and put some in the bottom of the hole and over the bulbs after they are covered over. We do get a donation of Milorganite, but we find it also has a rodent repellent effect. Humans can smell it for seven to ten days, but rodents smell it much longer if we put it on top of the bulbs. That odor keeps them from digging into the bulbs. It is also a light fertilizer and does not burn.

**Tools:** The slide shows a number of different tools you can use to plant bulbs, including dibblers. Most of these compact the soil, rather than removing it. They are alright in loose soil with smaller bulbs. We prefer to use a bulb augur to avoid the compaction and because it works well between other plants, especially perennials, and is very efficient. The drill can be wrenched from your hand if you hit a root, so you need to be careful to avoid injury. One of the slides shows a volunteer who planted 10,000 bulbs by herself one afternoon after we pre-dug the holes. The slide shows the

### ***Bulb Lasagna***

One way to increase impact is to plant layers of bulbs, either to vary the palette or the bloom time. To accomplish this, deeper bulbs are planted, covered with soil, then the shallow bulbs are planted on top of the deeper ones. Tulips and grape hyacinths are good companions, complement each other and go dormant at the same time. A mass of either looks beautiful, but together they give a lovely bi-color. Another slide shows a planting of four different bulbs with daffodils, hyacinths, tulips and anemones.

### ***Bulb Lawns***

Some bulbs bloom early, such as crocus, early tulips and iris reticulata, while grass is just starting to green up. If you choose to do this, just remember that the foliage does need to photosynthesize after blooming to maintain the bulb, so you can't cut the grass too early. Also, most bulbs prefer to be dry during summer dormancy, so it may not be a good idea to plant bulbs in the lawn if you will be irrigating the lawn.

Shown in one slide is one of Olbrich Gardens' meadow gardens planted with spring bulbs such as species tulips and Siberian squill. These meadows are blooming while the grasses are just greening up and are mowed only once a year. It saves on resources, but is also great for bulb longevity.

## **Bulb Choices**

**Winter aconites:** Starting in late winter around the end of March, bright yellow aconites will begin blooming even with snow on the ground. These are in the buttercup family, but only 3 inches high. Do let them go to seed so they will colonize. The ants like the seeds and will carry them around and help spread them. Minor bulbs like this can be planted in the understory of deciduous trees in a standard shade garden and still receive adequate sunlight. They will complete their growing season and go dormant by the time the trees shade the ground.

**Snowdrops:** This harbinger of spring has a bloom time in late March or early April and they also may bloom when snow is on the ground. There are several species with different flower forms. You must get close to appreciate the flower form as the slide shows. We plant them by the thousands as they are "a dime a dozen".

**Crocus:** We don't spend a lot of time on crocus because they are a favored food of rabbits and deer and repellants are too expensive. We have 20,000 crocus planted at the gardens but visitors never see them bloom as they are mowed down by wildlife. There are many species which bloom in April to early May and attract pollinators.

**Scilla or Siberian squill:** This inexpensive, non-native bulb is a good spreader and is great in bulb lawns. Beware if you plant in bare soil as it may get rampant by dropping seed so you will see many tufts of juvenile foliage. The foliage dies down in early June. It looks lovely in the lawn with a white form.

**Pushkinia or Striped Squill:** The petals are white with a powdery blue mid-rib and they work well in a bulb lawn. We like to plant drifts of these and they naturalize well.

**Chionodoxa:** This very hardy bulb has a late April show, but is not well-known. Glory-of-the-snow blooms are the same height as the foliage and come in pinks, blues, and whites. It is a long-lived bulb and we have patches that are 20 years old. It may not be suitable for a bulb lawn since the grass is already up and growing well when it blooms. The slide shows a carpet of these providing a beautiful display in an otherwise bare shade garden floor at Olbrich Gardens. Once they are done, the garden segues into shade-loving species.

**Daffodils:** There are 13 divisions of daffodils all of which are represented at Rotary Gardens and 30,000 varieties in those divisions. They are classified by flower form and the next slides show some of the many forms available with singles and doubles and cup colors varying from white to yellow to orange to salmon. Narcissus is the genus, daffodil the common name, and jonquils are one division. Peak bloom time is mid-April and early May. 'Brackenhurst' is known for its clear orange center, and 'Replete' and 'My Story' both have double salmon centers. 'Rip Van Winkle' a double yellow with spiky petals is a favorite. Daffodils like a little more room; seven or eight bulbs should be planted in a hole 2 feet wide knowing that they will proliferate and become congested over time. If you are no longer getting flowers it could be soil fertility or it could be that the offsets are over-crowded. Dig them up even now, separate them and fertilize when replanting. We have revitalized many plantings this way. With daffodils, you need to leave the foliage until it is yellow or brown to ensure vigor for the next year. Some people tie up the ripening foliage or braid it, but if you incorporate them around perennials you can obscure the yellowing leaves. We cut the foliage when it yellows and flops, or it would be the Fourth of July before the foliage went dormant. Daffodils are not bothered by deer or rodents.

**Grape Hyacinths:** In the slide shown, grape hyacinths flower amongst emerging hosta, providing early season color. There are many species in the Muscari genus such as *M. latifolium*, *M. botryoides* and *M. armeniacum*. *M. armeniacum* will send up fresh foliage late in the season, but the perennials do hide that foliage. They provide a shot of blue color, which to my mind is always lacking in the garden. Some nice cultivars are *M. latifolium*, two-toned deep blue with light blue, 'Mt. Hood' with a gradation of color from deep blue to light blue to white, *M. botryoides* 'Album' with white blooms, and 'Valerie Finnis' with powdery blue flowers.

**Anemone blanda:** Wind anemones give 3 inch wide flowers on a 4-six inch plant. These bulbs look like a dried raisin are sometimes hard to differentiate the top from the bottom, so you should look for remnants of roots. Even if you plant them the wrong side up, they will figure out which way to go.

**Hyacinths:** These have a wonderful fragrance and come in many bright colors such as salmon, yellow, blue, purple, white, pink, red, and striped varieties. They do not like to be wet at all during dormancy. We had a large planting which was planted to annuals and irrigated during the summer causing the hyacinths to rot. They bloom at the same time as early season tulips.

**Camassia:** Camassia is native to the Pacific northwest and was used as a protein source by Native Americans. It does like moisture, including during its dormant period. It grows along riparian waterways and comes in blue, white, and variegated and single and double forms. 'Blue Danube' is a light blue cultivar. These often overlooked bulbs are 18-30 inches high with a fist-sized bulb that is planted 8 inches deep. They can be very long-lived; some of ours are 20 years old.

**Tulips:** About 15 years ago we planted 500 varieties of tulips for a spectacular tulip time and it was interesting to see all the different varieties. We lack the budget to do that again, but every year we do plant about 20,000 tulips. Critter damage can be significant so the Milorganite treatment is used. There are 15 categories of tulips, varying in form, color of petals and foliage, height, and bloom time. Flower form varies from lily flowering, double, single, parrot and peony flowering. Tulips are put in three bloom times: early, mid- and late season. That bloom time may shift depending on the weather, but typically for us, early is late April-early May; mid-season is around Mother's Day; late season is after Mother's Day.

Tulips may look different open and closed depending on flower form and the inside and outside petal color, providing more interest. When flowers are young they open in the day and close at night, but lose that ability as they age and the petals then drop.

Some noteworthy cultivars are peony flowering 'Foxtrot'; viridiflora varieties such as 'Rai' with green striping on the petals; single late 'Hocus Pocus' with its 3 foot tall stem and 6-7 inch yellow flowers; diminutive species tulips such as *T. fosteriana* 'Juan' with purpling foliage, *T. greigii* 'Corsage' with its stippled and striped foliage, and *T. tarda* with star shaped white flowers with yellow centers blooming in a bulb lawn.

To remove the spent foliage after bloom, we give a gentle tug and if it gives it is ready to pull. If there is any resistance, it isn't.

**Fritillaria:** The genus need perfect drainage and it is difficult to accommodate that if you irrigate your garden. The checkered fritillary or snake's head flower, has beautiful arching bells. *F. imperialis* or crown imperial is striking with its crown of yellow or red bells, but is stinky. It is hardy to Zone 4, but not long-lived, lasting only about 2 years for us due to the drainage issue. The cultivar 'Aureo Marginata' with its variegated foliage, is about \$20/bulb.

**Alliums:** We call these puffballs on a stick. We still have alliums blooming in the garden now, but the slide shows a spring-blooming allium. The best thing about alliums is the flower, as the foliage dies around the same time as peak bloom. The best way to use these is as floating spheres above other foliage, and cut them back as soon as the flower fades. A word of warning: the sap comes out clear but turns orange upon oxidation and the stain is very difficult if not impossible to remove from clothing.

'Purple Sensation' with its large purple spheres complements many other plants as shown in the slides with peonies, tiger-eye sumac, and *Deutzia* 'Chardonnay Pearls'. Once the flowers have faded, you can even spray paint the seedheads for longer interest in the garden.

We have about 55 varieties of spring blooming alliums in the gardens and some are rampant reseeder. 'Mt. Everest' is a great white with a six to seven inch sphere; 'Globemaster' has giant purple flower heads although they diminish over time; *A. karataviense*, under 18 inches high, with large wide blue leaves comes in purple and a white form called 'Ivory Queen'; *A. christophii* or Star of Persia is a favorite with 18 inch stems but almost 12 inch diameter purple flower heads; *A. giganteum*, our latest blooming allium in mid-June; *A. azureum* is a prolific reseeded but has beautiful blue flowers.

## **Wildlife Damage**

You can see some of the damage caused by wildlife on page 17. We lack enough repellants, but have tried liquid repellants such as Deer-away. We do use a repellant called Plantskydd and that works pretty well. We do continue to experiment with different repellants.

## **Bulb Lifting**

We actually lift many bulbs in leaf. Shown on the slide are some alliums, which we are lifting and separating and relocating. We also do this with daffodils.

## **Final Images**

The next few slides show some of the beautiful displays using bulbs in the gardens. One of the shots is of *A. azureum* in the formal garden at Rotary Gardens, which provides that beautiful blue. Our warmer winters may

contribute to some unwanted seeding, though. Some of the next images show 'Hocus Pocus' in a border before summer annuals are planted, tulips in a circular bed that complement our color scheme, and more alliums in the formal garden. If you want to keep up with the show throughout the season, go to Mark's blog at [www.RotaryGardens@blogspot.com](http://www.RotaryGardens@blogspot.com)

## Questions/Comments for Mark Dwyer

*How long do alliums last in the garden?*

All go on, but sphere size gets smaller over time. Most of our larger cultivars have gotten smaller, most likely due to offsets forming. Maybe with more fertilization, they would stay.

*Have you used autumn crocus in the garden?*

Yes, we have about 10,000 in the gardens. That bulb is actually in the Colchicum genus. Foliage emerges in early spring and dies in the summer, but they flower in September. They are fist-sized so are planted deeply. They are poisonous, so wildlife leaves them alone. They most likely are not hardy for some of the northern counties.

*Do you have any experience with overwintering bulbs in the refrigerator?*

We have forced bulbs in the past. We usually plant them in containers and put them in the refrigerator to imitate a cooling period. The chilling time varies between 8-15 weeks. Then we slowly warm them up and place them in indirect light and they start to bloom for an indoor display. Many tulips and hyacinths are good forcings, but you can do it with most bulbs. There are lots of resources on line for guidance.

*What was the blue flower just before the daffodils?*

The carpet of blue is Chionodoxa luciliae. It is a very good naturalizer and long-lived. That picture was taken at Olbrich Gardens.

## ANNOUNCEMENTS

Kim (Winnebago County): Our tree workshop, which is full, is next week. We still have space in the Appleton work shop.

## FINAL NOTES

The next meeting is September 12. Diana Alfuth will be moderating for Brian Hudelson. Next week will be the wrap-up, summary and evaluation of the season.

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:

### VEGETABLE CROP UPDATE

Vegetable Crop Update Newsletter #21 is available at <http://www.plantpath.wisc.edu/wivegdis/>

Topics covered in the issue #21 include:

Late blight updates

Blitecast and P-Days for late blight and early blight management

Cucurbit downy mildew.

Cucurbit Powdery Mildew fungicide trials – status update

### PDDC UPDATE

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

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

There is no PDDC update this week.