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THE PURDUE LANDSCAPE REPORT

In This Issue

Disease Worries on Lawn Seed and Seedlings?

(Lee Miller, turfpath@purdue.edu)

Summer 2024 was a stressful season for lawns in Indiana and throughout the region. Temperatures often spiked to uncomfortable levels, particularly towards the end of August, and were accompanied by either sweltering humidity or an abrupt halt to rainfall. Diseases such as brown patch on tall fescue were prevalent and leaf spot/melting out diseases on Kentucky bluegrass and perennial ryegrass lawns were kicked off early in spring with frequent rains and didn't let up through much of the season. These diseases were particularly severe on shaded and over-irrigated lawns, driven by longer periods of leaf wetness.

As discussed previously, fall is the perfect time to rehabilitate the lawn and restore density with seed. Fall has shorter daylengths but still enough sunlight and heat to enable germination and establishment before winter arrives. Combined with fertility and aerification or heavy raking to ensure good seed soil contact, seeding a lawn in fall is a great way to get back what summer stresses may have taken.

Young turfgrass seedlings are susceptible to damping off diseases caused by *Rhizoctonia* and *Pythium* spp. However, planting during the cooler fall period greatly reduces this likelihood.

Figure 1. Young turfgrass seedlings are susceptible to damping off diseases caused by Rhizoctonia and Pythium spp. However, planting during the cooler fall period greatly reduces this likelihood.

But what about those dastardly diseases that harmed the lawn in the first place? Diseases that impact newly seeded or newly emerged seedlings are termed "damping off". Preemergence damping off results in poor establishment, and postemergence damping off results in flimsy and weak seedlings that rapidly decline and return back to bare ground. In larger seeded stands, symptoms will normally start in a small area and expand. In conducive morning conditions, pathogen mycelium (the signs) may even be present along leaves or seed bases.

These diseases are one of the main reasons we do not seed in late spring or summer. The hot, humid environment is conducive for these diseases to dine on tender baby seedlings, and planting during the heat of summer is throwing them right in the boiling pot. By planting in the fall, this summer stress is in the rearview mirror instead of the windshield, quelling this threat.

Preventive fungicide applications for damping off on lawns are often unnecessary and not suggested. Other practices can effectively reduce or eliminate the likelihood of seedling diseases including:

- Seed at the appropriate rate. If restoring lawn density is

the goal, putting out enough plant seed is the key. Overseeding rates should be in the 1.5-2 lb per 1000 sq ft range for Kentucky bluegrass and 6-8 lb per 1000 sq ft for tall fescue.
- Irrigate the seedbed in frequent, small doses throughout the daylight hours. Note this is exactly the opposite of the recommendation for established lawns. A useful adage is to irrigate a seedbed enough to make the soil dark, but don't water so much that it glistens.
- When seedlings do emerge, water more often in the morning hours than in the evening.
- Provide good surface and subsurface drainage to the seedbed.
- Attempt to alleviate barriers to air movement and shade. This doesn't mean knocking down walls, but sliding the grill or some outside chairs around may help.
- Light applications of mulch or straw can be left in place after seedling emergence. Do not over apply. A good rule of thumb is about half of the soil or surface should be visible after application. If using straw, 1 bale should cover approximately 1,000 sq ft.
- If using a non-biodegradable seed cover, remove it as soon as seedlings emerge.

Enjoy Your Trees While Checking Them

(Ben McCallister, bmccalli@purdue.edu)

August was *National Check Your Tree Month*, but this is something that every tree owner/manager should be doing year-round. As the last hot days of summer are finishing up and we look forward to cooler fall days, we can look to our trees for different signs of trouble.

Most people tend to look up at the canopy before anything else in trees. Check leaves for dieback, discoloration, stickiness, or signs of chewing. Check branches and the main stem for damage like splits and breaks, peeling bark, tunneling patterns under the bark, oozing wet spots, or sawdust around the tree. These could be signs of issues in the root system, pathogens like bacteria or fungal organisms, insect problems, or structural damage.

This is not an exhaustive list and if you notice these or anything else that seems off, it could be time for a deeper dive into what might be wrong. If you know the species of your tree the Purdue Plant Doctor is a great tool to narrow down a diagnosis. You can also contact your local Extension office or an ISA Certified Arborist.

On a more positive side, you don't have to be on the lookout for damage, decline, or signs of pathogens and pests. It is also a matter of enjoying the trees in your landscape. Take some time out of your day to sit in the shade especially as we transition from hot summer temperatures into the cooling of autumn. Revel in the color changes as chlorophyll production slows revealing the carotenoids (that give us yellows, oranges, and browns) and anthocyanin (that produces reds and purples). In winter, not only can you better see damage in the canopy hidden by leaves in the growing seasons, but also the structure and architecture of the canopies in different tree species and the differences in bark textures. And in Spring, new growth of leaves and flowers shows us Winter is nearing its end, bringing warmer days.

So check your trees throughout the year. But not only for potential issues and risk management but also for enjoyment. Trees offer us no many benefits and sometimes it takes a little reminder. If you do see any signs of decline or damage, again, be sure to contact your local Extension office or an ISA Certified Arborist.

Welcome Meteorological Fall, Drought Concern Grows

(Austin Pearson, pearsona@purdue.edu)

As September begins, we officially welcome meteorological fall. While the autumnal equinox isn't until September 22, the past few mornings have already brought a crisp, fall-like feel to the air. Around town, fall decorations are starting to appear, and a few maple trees are showing early hints of color. My wife, however, is eagerly waiting for me to make the dreaded trip to the attic to fetch our own decorations. This weekend, many of us may see temperatures that don't rise above the 60s, a refreshing change from the 90°F+ heat we endured just last week. Despite these cooler temperatures, dry conditions have set in across the state and look to continue.

August brought slightly below-average temperatures to Indiana, with a preliminary statewide average of 73.1°F, which was 1.2°F below normal. Temperature swings were notable throughout the month. At the Indianapolis International Airport, highs exceeded 90°F on seven days, compared to the historical average of just over three days above 90°F for the period (1931-2024). Interestingly, the airport also recorded a slightly higher-than-average number of days with highs below 80°F.

Precipitation levels were below normal for most of Indiana, with a

preliminary statewide average of 2.81 inches, which was 1.48 inches below the norm. The largest deficits were seen in northeastern and southern Indiana, where rainfall totals were up to 2 inches below normal (Figure 1). Central Indiana fared better, with precipitation totals closer to the average. Notably, WASHINGTON 1.5 NW in Daviess County reported just 0.87 inches of rain, an astonishing 2.25 inches below normal for the month. In contrast, CAMPBELLSBURG 8.4 NNE in Washington County recorded the highest rainfall in the state, with a total of 7.15 inches.

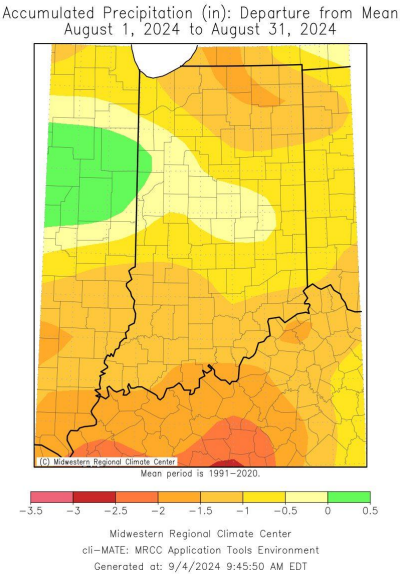

Figure 1: August 2024 accumulated precipitation represented as the departure from the 1991-2020 climatological average.

This week's drought monitor indicates widespread abnormally dry (D0) conditions, with some areas experiencing moderate drought (Figure 2). Currently, 18.14% of Indiana is in moderate drought (D1), while 90.01% of the state falls under either the D1 or D0 category. Rapid dry-down of crops, declining streamflows, and dormant lawns and pastures are becoming common sights in the affected regions. Several counties in southern Indiana are beginning to implement local burn bans (Figure 3).

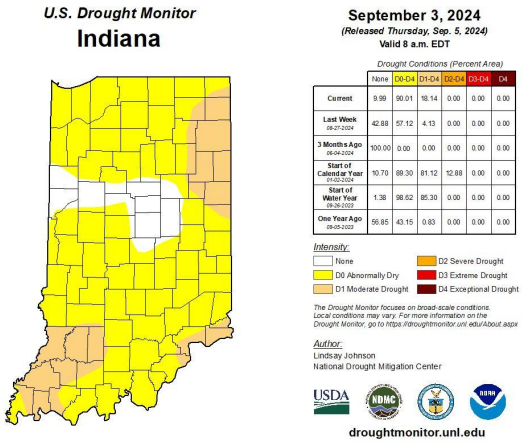

Figure 2: September 5, 2024 release of the US Drought Monitor.

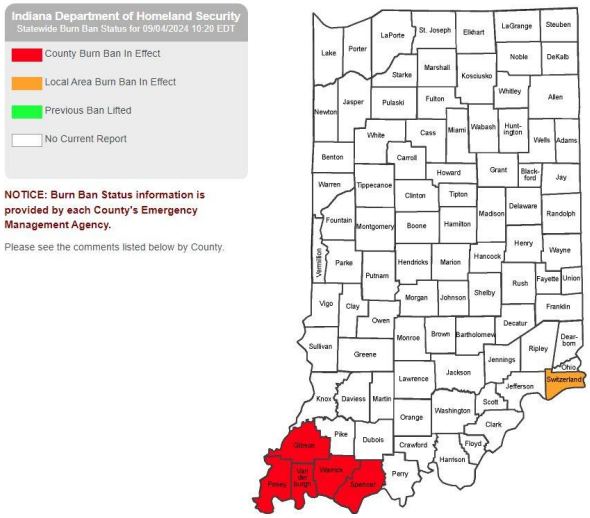

Figure 3: Indiana Department of Homeland Security Statewide Burn Ban Status Map.

Looking ahead, the Climate Prediction Center's outlook for September 9-13 suggests that cooler temperatures and below-normal precipitation are likely to continue (Figure 4). However, the 8–14-day outlook shows elevated chances for above-normal temperatures and continued below-normal precipitation (Figure 5). It seems drought conditions may persist through much of September.

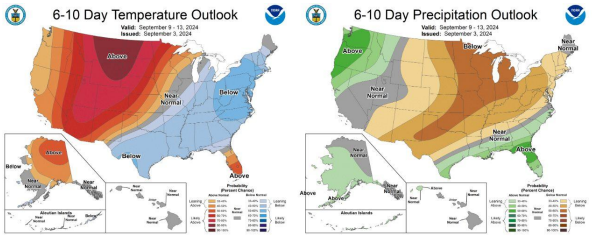

Figure 4: The Climate Prediction Center's 6-10 Day Temperature and Precipitation Outlook, valid September 9-13.

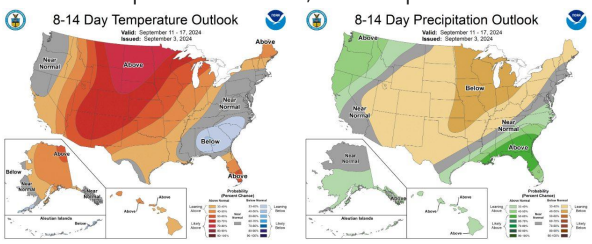

Figure 5: The Climate Prediction Center's 8-14 Day Temperature and Precipitation Outlook, valid September 11-17.

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Editor: Kyle Daniel | Department of Horticulture and Landscape Architecture, 625 Agriculture Mall Dr., West Lafayette, IN 47907