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THE PURDUE LANDSCAPE REPORT

In This Issue

Will May's Mixed Precipitation and Temperatures Persist into June?

(Austin Pearson, pearsona@purdue.edu)

Precipitation in May has varied tremendously, but most of the state has generally been on the dry side. Areas from Vermillion and Parke Counties to Lake Michigan have received between 25% and 75% of the normal precipitation through May 27 (Figure 1). Conditions were dry enough that thunderstorm winds on May 16 prompted the National Weather Service Chicago Office to issue rare dust storm warnings for Benton, Newton, Jasper, Lake, and Porter Counties. Farmers in these counties were further ahead due to the drier conditions, which exposed emerged soybeans to severe damage and led to widespread replanting decisions. Southern Indiana also faces challenges due to the limited planting windows. The USDA National Agricultural Statistics Service Indiana Crop Weather Report on May 27 indicated that 76% of corn and 71% of soybeans have been planted, both nearly on schedule despite the challenges.

Abnormally dry (D0) and moderate drought (D1) conditions are once again expanding across northern Indiana due to both short and long-term precipitation deficits. According to the US Drought Monitor on April 29, 2025, over 14% of the state was under D0 conditions. By May 27, 2025, the map reported that just over 32% of the state was experiencing either D0 or D1 conditions (Figure 2).

Temperatures have been near or slightly below normal throughout the state, with the average for the state being 0.5°F below normal for the first 27 days of the month. In last week's article, we discussed various GDD products and noted that these are purely temperature-driven. As a result, Modified Growing Degree Days since May 1 are between 20 and 40 units below normal (Figure 3).

What can we expect for June? The Climate Prediction Center outlook indicates near-normal precipitation and above-normal temperatures for the first week of June (Figure 4). This trend of increased chances for above-normal rainfall and temperatures is likely to persist into the second week (Figure 5). Overall, CPC products indicate that the western half of the state is expected to experience above-normal temperatures, with equal chances for precipitation. In contrast, the eastern half is expected to see above-normal rainfall.

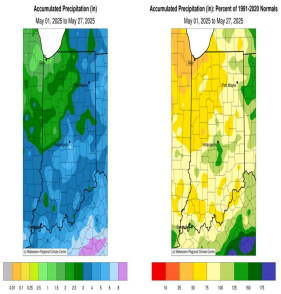

Figure 1: Left – May 1-27, 2025, accumulated precipitation represented as the departure from the 1991-2020 climatological normal. Right – May 1-27, 2025, accumulated precipitation represented as the percent of the 1991-2020 climatological normal.

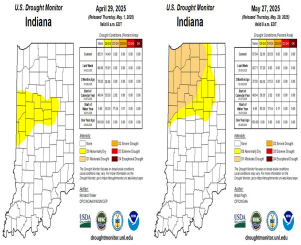

Figure 2: Left – April 29, 2025, US Drought Monitor Map. Right – May 27, 2025, US Drought Monitor Map.

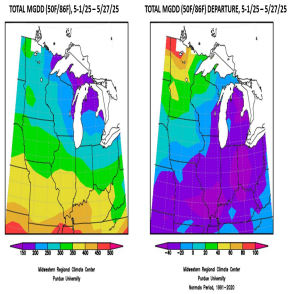

Figure 3: Left – Total MGDD (50°F/86°F) accumulation for May 1-27, 2025. Right – Total MGDD (50°F/86°F) accumulation displayed as the departure from the 1991-2020 climatological normal.

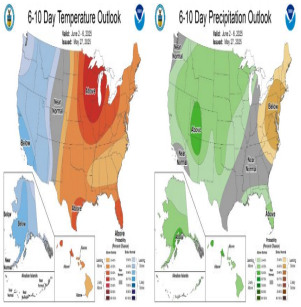

Figure 4: CPC 6-10 Day temperature and precipitation outlook maps, valid June 2-6, 2025.

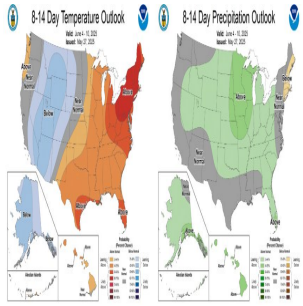

Figure 5: CPC 8-14 Day temperature and precipitation outlooks, valid June 4-10, 2025.

Simple Steps to Care for Your Tree: Mulching

(Ben McCallister, bmccalli@purdue.edu)

Tree care, in many cases, can be expensive if you require the assistance of an arborist for pruning or removals. Extreme weather events, characterized by extensive rain and wind, can cause damage to the canopy or, in worst-case scenarios, lead to tree failure. In cases of failures, weather is often the final push to already existing issues. One cause that can lead to decay, decline, and failure if applied incorrectly can also extend the life of your tree with proper application.

Mulch is the double-edged sword that can promote healthy growth by maintaining soil moisture and temperature through extreme heat, cold, and drought, enrich the soil in the critical root zone, maintain a safety area from mechanical damage from lawn care tools, and add a nice aesthetic. But it can also cause decay through excess moisture to the root flare, damage from pests like mice and insects that can live in mulch, expose the tree to pathogens, and promote unnecessary root growth and/or stem

girdling roots that cut off nutrient supply between the root system and the rest of the tree.

The application is the same if it's the first time mulching a tree or a re-application. Add enough mulch so there is a 2–3-inch layer sloping away from the tree with at least a 3–5-foot radius around the stem (older, larger trees can benefit from larger mulch rings). No volcano mulching, make sure you also have around a 1-2-inch gap between the stem and the start of the mulch ring. If you are reapplying mulch, first rake the old mulch to even the layer and mix some into the soil if possible. If your tree has already been mulched and has been volcano mulched, simply dig out the excess, exposing the root flare and creating that 1-2-inch gap between the stem and the mulch.

This simple act is relatively inexpensive, does not require a lot of time, and will help keep your tree healthy, extending its life. If you notice any other issues with your trees, hiring an ISA Certified arborist is the next step in managing your trees' health. To find an arborist near you and verify credentials, use the link at Find an Arborist, Trees are Good, International Society of Arboriculture (ISA).

Resources:

Find an Arborist video, Trees are Good-International Society of Arboriculture (ISA)
Trees and Storms – The Education Store, Purdue Education's resource center
Caring for storm-damaged trees/How to Acidify Soil in the Yard – In the Grow, Purdue Extension
Moist soil and rotten roots makes it easy for trees to come crashing down – Fox 59 News
Expert: Some storm damage can be easily prevented – Fox 59
Why Is My Tree Dying? – The Education Store
Tree Risk Management – The Education Store
Mechanical Damage to Trees: Mowing and Maintenance Equipment – The Education Store
Trees and Electric Lines – The Education Store
Tree Defect Identification, The Education Store
Planting Your Tree, video, The Education Store
Tree Installation, The Education Store
Tree Wound and Healing, Got Nature? Blog, Purdue Extension – Forestry and Natural Resources
Subscribe – Purdue Extension-FNR YouTube Channel

Ben McCallister, Urban Forestry Specialist
Purdue Forestry & Natural Resources

Figure 1: Examples of volcano mulching.

Figure 2: Digging out and exposing the root flare.

Figure 3: Creating a 1–2-inch space between the root flare and the mulch.

Watch for Downy Mildew on Roses and Brambles caused

by Peronospora sparsa

(Tom Creswell, creswell@purdue.edu)

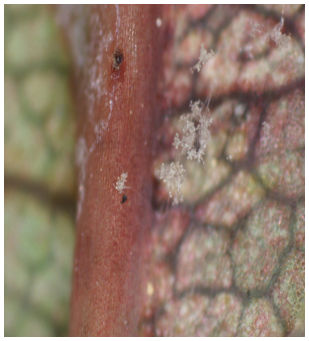

Figure 1: Sparse downy mildew spore production on the underside of a rose leaf

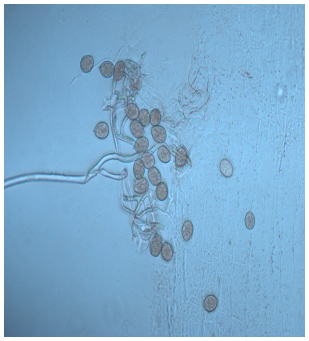

Figure 2: A highly magnified view of downy mildew spores on rose

Figure 3: Downy mildew symptoms on rose leaves showing red and purple spots

Figure 4: Downy mildew symptoms on rose leaves

Figure 5: Downy mildew lesions on rose stems showing purple or black blotches

Figure 6: Downy mildew symptoms on blackberry

Figure 7: Downy mildew symptoms on a bramble

Cool, cloudy weather with frequent rainfall and high humidity provides ideal conditions for the development of several diseases, including downy mildew. The fungus-like pathogens that cause downy mildew are commonly known as ‘water molds’ and are classified as oomycetes. Many types of plants are susceptible to downy mildew diseases, including sunflowers, grapevines, impatiens, other ornamentals, and several vegetable crops. Perhaps the downy mildew diseases of greatest concern in the landscape and home garden are those on rose, raspberry, and blackberry, all caused by *Peronospora sparsa*. The name ‘sparsa’ stems from the fact that spores of the pathogen are often difficult to find and may not be present

unless conditions are right. Figure 1 shows sparse spore production on the underside of a rose leaf. A highly magnified view of downy mildew spores on rose is shown in Figure 2.

Downy mildew of rose and bramble crops is of particular concern because the pathogen becomes systemic inside the plant, not just affecting leaves. Symptoms may appear rapidly in spring, with angular-shaped necrotic leaf spots amid yellow areas (Figures 3 and 4). Black and/or purple spots develop on petioles and stems (Figure 5), and roses may partially defoliate, while new buds of raspberry and blackberry may sprout out and then die rapidly. On some brambles, the leaves may develop a mottled appearance that may be mistaken for a virus disease (Figures 6 and 7).

Management: Start by purchasing healthy plants from a trusted source to avoid bringing in infected material. Store plants in well-ventilated areas until planting and avoid overhead sprinkler irrigation where practical. Stems with downy mildew symptoms should be pruned out as they develop. In addition to persisting in infected stems the pathogen may overwinter in debris so fallen leaves and stems should be removed from the landscape promptly but avoid working in plants when they are wet. Spacing plants for good airflow may help reduce humidity to some degree. Spores may spread by air movement or water splash. Fungicides labeled for downy mildew control are commonly used in greenhouse and nursery rose production but are not generally recommended in the landscape.

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