Advantage: Anthracnose

Weather

While temperatures are running a touch above normal for the month, it sure hasn't felt like it. Despite a few temperature spikes, averages have been kept near summer normal by the “high low” temperatures instead of scorching hot daytime temperatures. Particularly in the last five days, August has felt like late September/October football weather, which has been a rarity in the region in recent memory. Perhaps Mother Nature is feeling a bit poorly about the rough treatment last summer, and is providing an early chance to get cool season turfgrasses back on their feet (see below). A temperature spike is expected to round out this week, but cooler than normal temperatures are expected to return and greet September.

While temperatures may be mild, the storm clouds have been far from timid. Over the past month, the region has been the nation’s bullseye for heavy rainfall, particularly eastern Kansas and Kansas City which has absorbed (or had run off) considerable precipitation. The drier conditions expected to start September will be welcome in these areas, whereas in most summers drought conditions are a constant companion and many are wishing for rain.

Too early to talk winter? The Old Farmer’s Almanac has predicted a “snowy, icy, icky” winter for much of the region (https://www.almanac.com/old-farmers-almanac-2020-winter-forecast), with at least seven snowstorms sweeping the nation. For reference, last year’s winter was forecasted as “teeth chattering cold with plentiful snow”. While not strictly scientific and conflicting with other long range forecasts, the adjectives snowy, icy and icky from the old farmer don’t instill confidence that winterkill pressure from 2019 won’t recur in 2020.
Advantage: Anthracnose

Quick Hits

- Foliar diseases on golf putting greens – As often is the case in mid-August, foliar diseases exploded on our research greens in untreated plots and plots where fungicide application intervals had expired. If one ever wondered what would happen if creeping bentgrass putting greens were left untended in Missouri, the pictures above should clearly answer the question. As noted again below, the physiological condition of bentgrass in mid to late August is at its lowest point despite what could be considered a mild summer by current regional standards. This results in a perfect predisposition for strikingly conspicuous and damaging disease outbreaks.
**Advantage: Anthracnose**

Interestingly, we tend to see copper spot caused by *Gloeocercospora sorghi* strike our research greens in middle or late August and last until mid-September. In practice, this disease would regularly be controlled by the spectrum of activity of various applied fungicides. In our trials, we will get the disease in untreated plots along with dollar spot and in fungicide treated plots that may control other diseases well but leaves this one behind. Penthiopyrad is one such fungicide, that will suppress dollar spot and anthracnose but if used alone throughout the season will leave a crop of copper spot in our plots. This demonstrates the need to use a few tools in the shed for disease control since different pathogens (also see *Pythium*) may not be sensitive to a particular fungicide chemistry.

- **Gray Leaf Spot:** In the previous update, a warning for gray leaf spot was issued and several other areas (even Wisconsin!) are reporting activity on ryegrass. PACE Turf Information Center produced this wonderful video describing the method of diagnosing the disease on ryegrass, which is similar to the method for detection on tall fescue, our major concern.

- **Fall armyworm warning** – Although we haven’t observed significant fall armyworm damage in lawns and turfgrass areas since 2014, last year several pastures and hay fields in southern Missouri had issues with the pest. Late August through September is the prime time for rapid outbreaks to occur, so be vigilant in scouting efforts on tall fescue and other high cut lawn grasses. Larvae have a conspicuous Y-marking on their head, net-like markings around the eyes, and four distinct dots on the dorsal side of each abdominal segment. For more information, see this previous update and a 2015 update from Dr. Jared Hoyle at Kansas State.

- **Large Patch Watch:** A little early, but soil temperatures are dipping near the 70 degree mark (click here to view in Missouri). This threshold is an action point to scout for potential large patch activity and to consider applying preventive fall applications in high amenity areas like fairways. On zoysia lawns, fall treatment should only be considered if large patch symptoms are pervasive and damaging. If the disease is present in a lawn now but not causing considerable damage, an application next spring should be considered when symptoms can escalate more quickly.

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**Turf Pathology**
Advantage: Anthracnose

- Get to Work on Cool Season Turf Early – These mild temperatures in late August and sustained cool forecast into early September is a perfect opportunity to get a head start on getting to work on cool season turfgrasses. Although the Ides of September (September 15) is often stated as a mantra of perfect seeding weather, we can get an early start now, and it is heartily suggested. Overseeding tall fescue and other damaged cool season areas is encouraged to rebuild density. Aerification and verticutting (or power raking) are a great way to prepare the seed bed, and as shown above are necessary to get roots air to breathe. If weeds are present in the lawn, be mindful of reseeding intervals on herbicide labels and plan reseeding activity accordingly.

Augustus Anthracnose Rearing Its Ugly Head
Advantage: Anthracnose

Augustus was the first emperor of the Roman Empire, and in honor of him the month of August bears his name. Like Augustus, anthracnose tends to rule over bentgrass putting greens in August when bentgrass is at its lowest point and unfortunately set for conquer. Several bentgrass samples over the past two weeks have had considerable basal rot anthracnose activity and decline. This pales to last year when Augustus Anthracnose reigned supreme and waged war all summer long, but now he’s back to collect his taxes.

Cool and comfortable temperatures bring mostly good news for superintendents, but in my experience when mild temperatures first hit in fall, or during an unexpected cool down in summer, anthracnose normally strikes. From a physiological viewpoint, this makes sense. Bentgrass is beaten down by higher temperatures and the pathogen which is omnipresent on leaf blades sinks its teeth down to the base of the plant. The kicker here is that anthracnose is a low nitrogen disease. Temperatures cool off, bentgrass wants to grow, and spoonfeeding doesn’t supply enough juice. To compound the issue in late summer, bentgrass roots have also been beaten back all summer long by high temperatures, so the plant can’t take up soil available nitrogen efficiently. Reacting dynamically to early cool temperature treats by bumping up the nitrogen is suggested to mitigate anthracnose activity.

In the past two years, we have observed damaging basal rot anthracnose on ‘Penn A-4’ and ‘T-1’ bentgrass cultivars. This contrasts with the previous notion that the newer varieties are not susceptible to the disease, particularly when compared to consistent observations on ‘Penncross’, ‘Pennlinks’, ‘SR1020’, ‘Providence’, ‘Seaside’, etc. Looking back on limited NTEP observations of anthracnose susceptibility, some of the newer cultivars do get anthracnose and therefore monitoring and control of this disease should be considered even on newer bentgrass varieties.

In curative situations, a contact and systemic fungicide tank-mix is recommended. Resistance of the anthracnose pathogen to several fungicide classes has been reported in other areas of the country, but it’s unclear how widespread resistance may be in this region. Therefore, and particularly at this point in the season after exposure to a number of applications may have already occurred, employing more than one effective active ingredient for both preventive and curative applications is recommended. Also don’t forget employing proper cultural practices, which are summed up very nicely in this Feb 2018 GCM article by Drs. Murphy, Clarke, and Inguagiato.