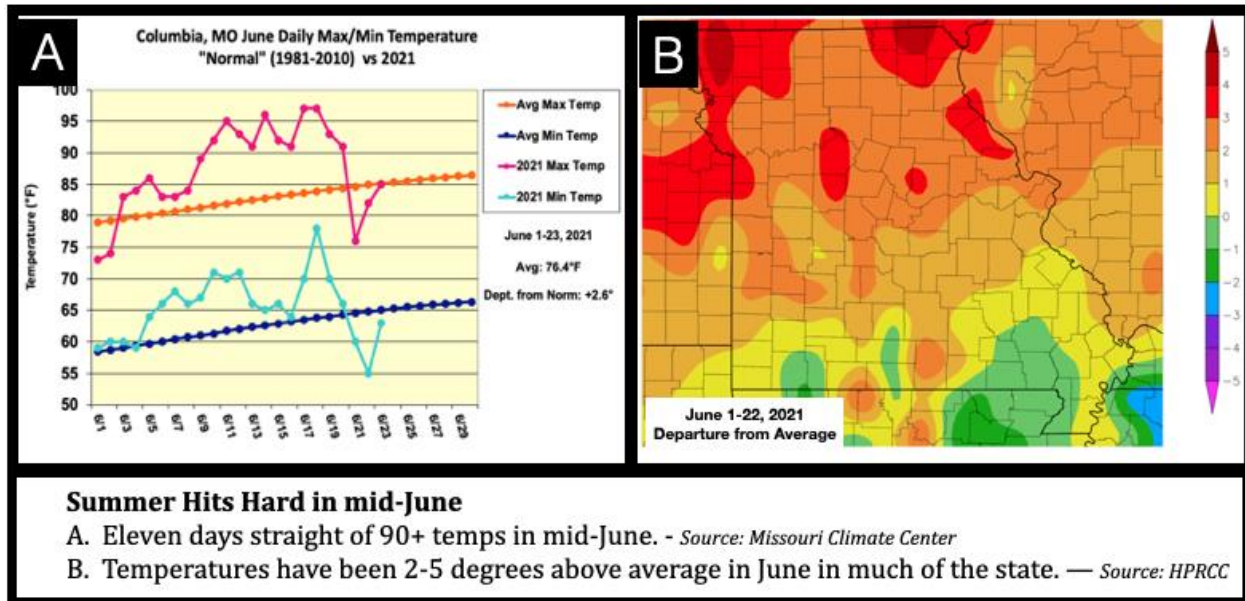


Quench the Grass, Not the Disease

Mark your Calendars – University of Arkansas & University Missouri Virtual Turfgrass Field Day – August 12th! More details forthcoming.

Weather



Summer Hits Hard in mid-June

A. Eleven days straight of 90+ temps in mid-June. - Source: Missouri Climate Center

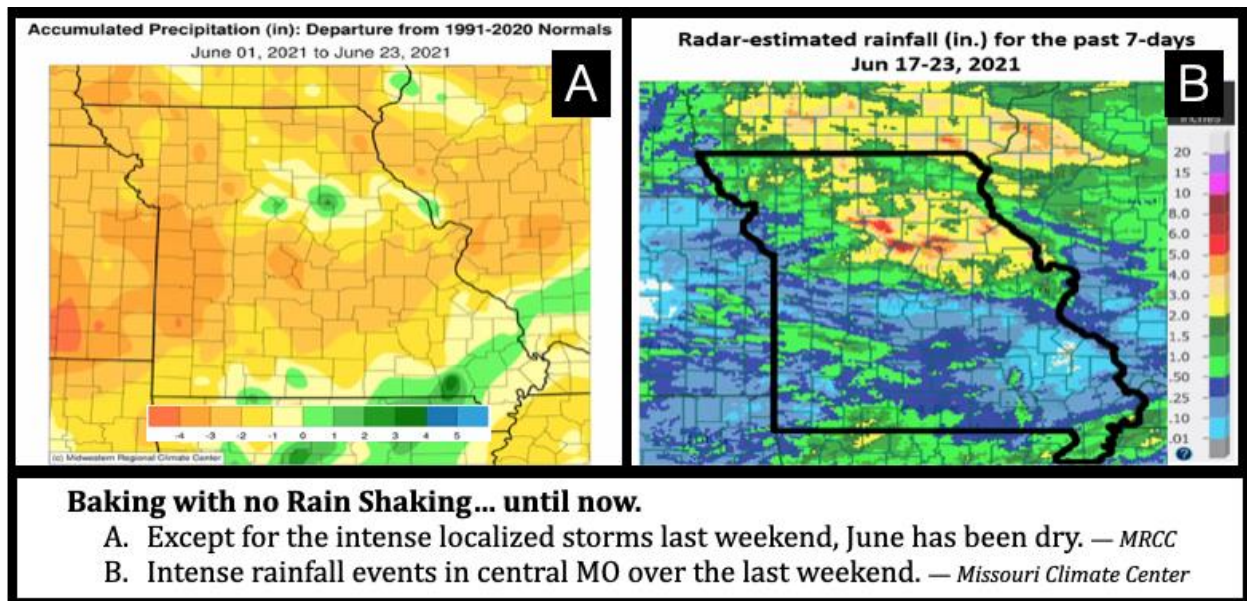
B. Temperatures have been 2-5 degrees above average in June in much of the state. — Source: HPRCC

Temperatures rose sharply in mid-June, and along with it cool season turfgrass temperature stress rose right along with it. Throughout the region, northward even into Minnesota and Wisconsin, many experienced several consecutive days above 90 degrees, amounting to the hottest 1st half of June on record for many in the region. The Northwest U.S. is now forecasted to experience these extremely high temperatures through the rest of the month. Here in Columbia we got to 11 90+ degree days in a row from June 10 –20 before a huge break arrived on June 21. Through June 20, many also got very little rain, halting diseases like brown patch and dollar spot on unirrigated turf and turning many areas quite crispy with a flash drought, ([unlike the much steadier drought still occurring in the high plains](#)).

Centered mostly in mid to north Missouri to St. Louis, heavy rainfall occurred last weekend along with the cool front. Both were welcome, but some of the more severe rainfall events wore out that welcome. Over three inches fell in Columbia with some damaging hail, while some localized areas tallied 5 – 6 inches in the short two-day span.



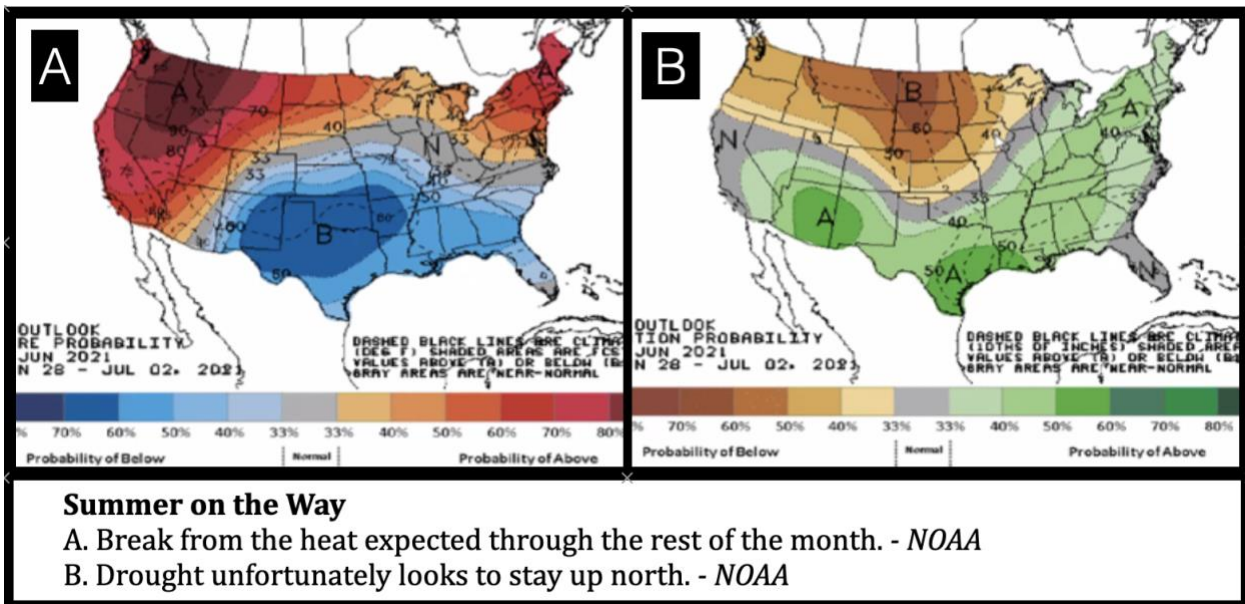
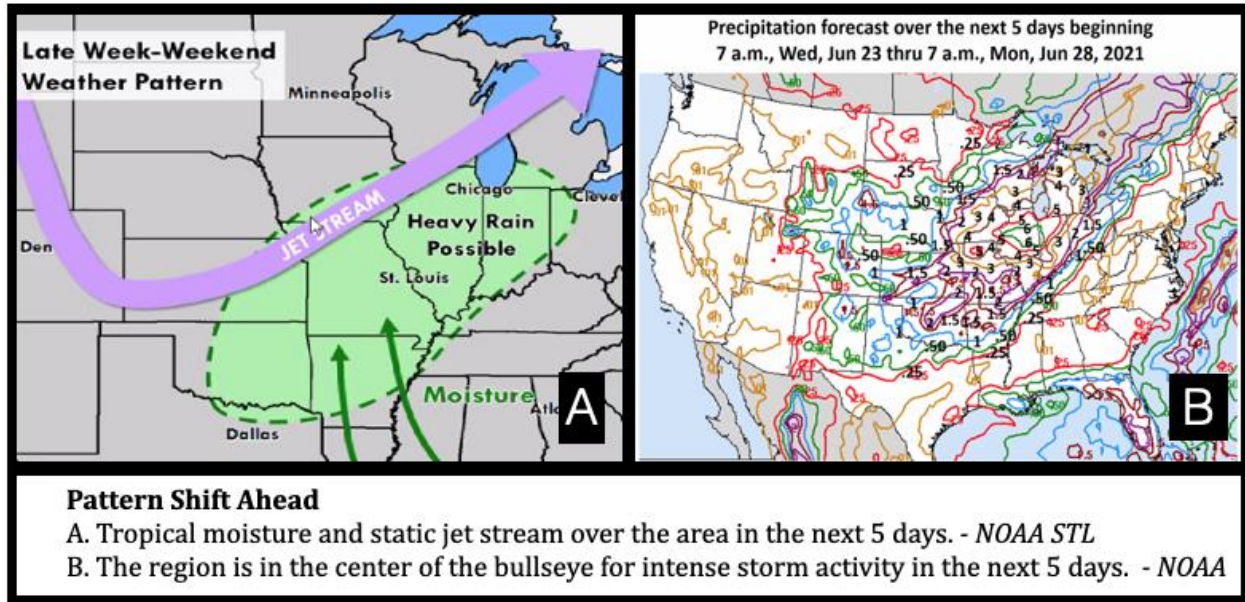
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As we move towards the weekend, expect a significant pattern shift heading through the end of the month. Forecasts indicate a high likelihood of intense rainfall, fueled by tropical moisture mingling with a stalled jet stream. Forecasts over the next five days indicate Missouri and much of Illinois is in the bullseye of heavy rain, with large areas expected to get 3 – 6 inches of precipitation. Flash flood watches are in effect for Kansas City and mid Missouri.



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Fortunately, forecasts indicate below normal temperatures through the rest of the month even into the start of July for Missouri and south. Brown patch and others will still occur with the steady rainfall and high humidity, but the severity of physiological decline on cool season turfgrasses will hopefully be mitigated by comparatively lower temperatures. Perhaps even enough to warrant some extra nitrogen to offset the heavy rainfall and more favorable growth temperature.



Quench the Grass, Not the Disease

Quick Hits

Pythium root diseases on putting greens – Heavy rainfall expected in June. Batten down the hatches, and make sure your drains flow.

Pollinator Week – In case you're about to miss it, this is pollinator week - <https://www.pollinator.org/pollinator-week>. If you have time this week (or any other week for that matter), do something nice for our winged critters who drive the pollen bus and allow us to eat. Consider a space on your property that may serve as pollinator habitat, or discuss the option with your clients. Practice proper pesticide stewardship principles including (but not limited to): mowing all areas before application, avoid treating weedy areas with flowers, use buffer strips around flowering landscape beds, don't spray when pollinators are active and consider alternative management strategies. In other words, mind your bees and Qs.

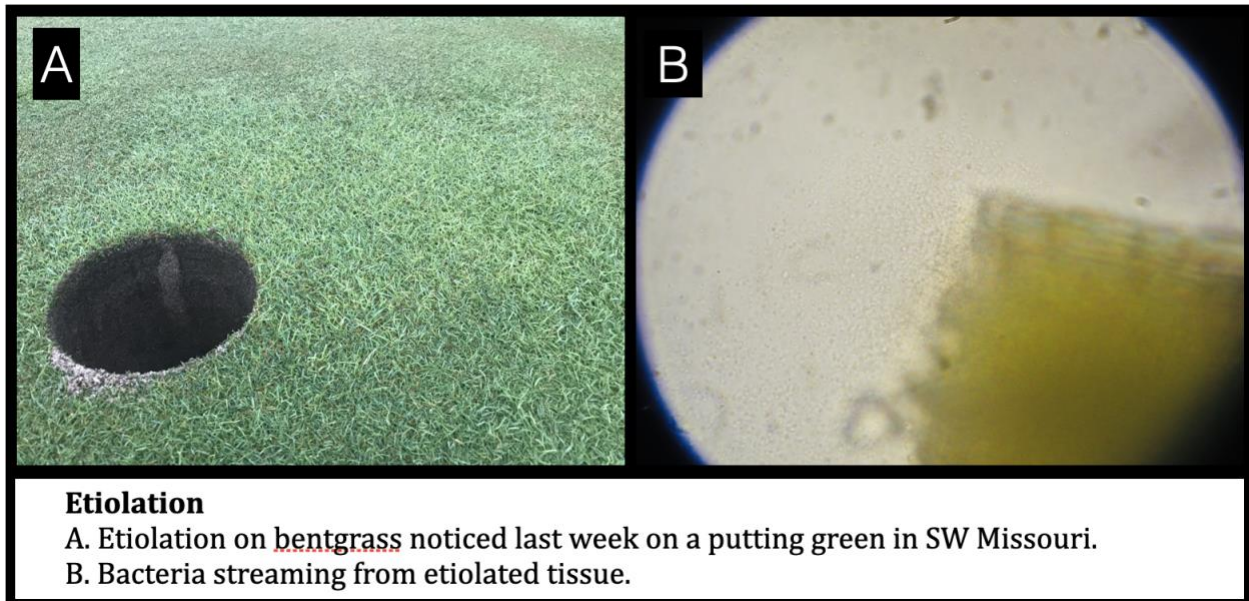


Foot Traffic: A curious case at the MU baseball field, with bermudagrass slow to green up in a straight line through the outfield into the stadium. Turns out, opposing players trotted in a very straight line this past pandemic-era spring from the outfield entrance to the dugout in an effort to social distance. The bermuda didn't take kindly to the concentrated traffic and winterkilled. Recovery is taking place in warmer temperatures, but it does demonstrate the profound impact of traffic on overwintering and spring greenup. The straight



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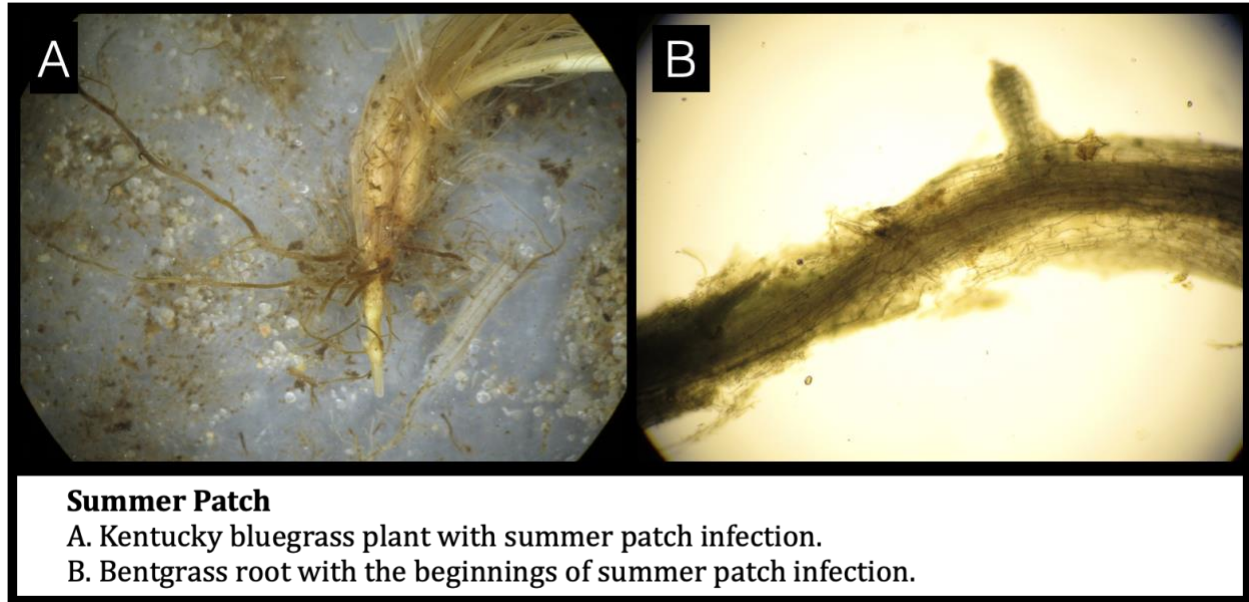
line also shows the difference between characteristic disease symptoms and an abiotic disorder, which could also be spray overlap of herbicides or other hot chemistries, or drain line issues. A small spot of transient large patch, (not as severe on bermudagrass), is also in the above photo for reference of characteristic disease symptoms.



Etiolation: A putting green with etiolation symptoms was submitted into the diagnostic lab earlier this week. The sample also had some summer patch infection in the roots (more on this below), but there was some bacterial streaming from the etiolated leaves. We haven't observed this disease in the past few years, presumably due to somewhat cooler summers. The last few weeks have been ripe with high temperature summer stress, which tends to suit this disease. We've come a long way since the early 2010s, thanks to work by now Drs. Giordano and Roberts who were working under the advisement of Drs. Vargas – Michigan State, Tredway and Kerns – North Carolina State. Freaking out and spraying the kitchen sink at this problem has been shown not to work and, in many cases, does more harm than good. Laying off a single application of plant growth regulator and restricting ammonium sulfate applications seems to aid recovery, along with adding in a Signature and Daconil Action into the rotation if necessary.



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Summer Patch: Both Kentucky bluegrass and creeping bentgrass samples were submitted into the lab this week with mild summer patch symptoms, but obvious infection. On putting greens, curative, a watered-in application of Briskway is suggested. In the case of severe infection on putting greens, tank-mixing the fungicide with a small amount of ammonium sulfate is suggested, taking care not to exacerbate black layer or etiolation if present. For non-golf course areas managing Kentucky bluegrass, however, there isn't a clear cut fungicide to suggest for curative application since many are labeled specifically for golf and not on other use sites. On these areas, one of the QoIs (i.e azoxystrobin, pyraclostrobin, fluoxastrobin, etc) and/or thiophanate-methyl is suggested as a watered-in application along with ammonium sulfate. Managing thatch, soil pH and manganese levels are important cultural practices for reducing the severity of this disease.



Quenching the Lawn's Thirst or Brown Patch?



As mentioned, significant environmental stress occurred in the last few weeks with the advent of summer. In many lawns throughout the state, cool season turfgrasses went into a “flash drought”. Recall that May was full of rain for many, causing oversaturated soils that produced fat and happy tall fescue with limited root systems. Enter June with hot, dry conditions and the plants go into a quick state of dormancy... a shock response.

Brown patch on tall fescue also started to become severe in late May, and whilst rating our NTEP tall fescue trial earlier this week, I noticed how drought can appear similar to older brown patch symptoms. Brown patch may appear more scattered or diffuse in a lawn as compared to drought symptoms. The real discerning character, however, can be observed in the leaf blade symptoms. Look at the margins of the brown areas for leaf lesions that have a distinct brown margin and tan interior. This will be a clue that brown patch is at play and not just the weather.

Another huge clue will be when rainfall does return. Does the tall fescue start to green back up? It seems simple, but tall fescue bounces back very quickly from drought dormancy and a little dormancy isn't disastrous. The homeowner (or client) may think brown equates to dead and hopes watering will bring the lawn back to life. If the real issue is brown patch, they're



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contributing to the decline and “killing the turf with kindness.” So look down carefully at the brown on tall fescue, and realize if irrigation will be a help or hindrance.

Turfgrass Diagnostic Lab Closed– July 1 to July 9

The plant clinic will accept turfgrass samples, but diagnoses won't occur during this timeframe as the diagnostician will be out of town. If you send them, they will be put in cold storage, but fresher is better.

