Warm Season Woes

Weather

Early May 2014 has run hot, which has been welcome news for those waiting on warm-season turfgrasses to wake up. Looking back on 2013, temperatures during this timeframe have been the exact opposite of 2014 (remember 5/3/13 was the lowest daily high temperature ever recorded in KC). Temperatures are set to moderate somewhat, but still stay above average over the weekend. Early next week it gets interesting as temperatures are set to plunge to 60 degree highs and lows in the 40s. This collision of air masses and southern air flow late this weekend and into Monday should result in some stormy weather.

In Missouri, very little or no precipitation has fallen thus far in May, and we are in a mild to moderate drought situation. This will change over the next week (and today) as frequent precipitation events are forecasted. Over the next week, the NOAA has predicted Missouri to be the hotbed of storm activity in the nation. The rains should erase the drought conditions, but may also cause some flash flooding and very severe weather in local areas. Feast or famine... when it rains it pours.
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Quick Hits:

- **A Large Patch Firenado Coming:** As expected, large patch on zoysiagrass is occurring throughout most of Missouri. It is occurring here in Columbia, and we have had reports or observed activity in KC, central MO, St. Louis, and eastern IL. It has been dry, and in non-irrigated areas large patch may not be expanding at full capacity. However, the slated forecast = a very conducive environment. Cooler temperatures will slow down growth and frequent precipitation will provide the fuel. You may have heard of the ‘Sharknado’ but this weather may make for a ‘Large Patch Firenado’. When large patch is very active and expanding, leaves will turn orange and fire along the patch margins. If zoysiagrass is not looking healthy now, it is important to look for this characteristic symptom now to differentiate this damage from slow green-up or from insect damage (which should occur later). If large patch is the cause, a curative fungicide application such as azoxystrobin or tebuconazole will be necessary to prevent the disease from spreading and becoming more severe. Also, the current recommendation is to postpone fertilizing zoysia with nitrogen during its emergence from dormancy. We, along with Kansas State University, are examining this more closely by applying different nitrogen sources during this critical infection period. As I noted last time, if you have a large patch outbreak this spring and would like to contribute to our research, please contact me and we’ll get a sample.
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#### Summer Patch Prevention:
The recent warm-up has pushed soil temperatures well past the threshold for most weed pre-emergents, but has also broken the barrier for summer patch preventives on Kentucky bluegrass sports fields, lawns and roughs. This soilborne disease is normally observed in mid June – August, but the infection period for the causal pathogen (*Magnaporthe poae*) is now. Since the temperatures are forecasted to decline, there should be a good window to begin preventive fungicide applications over the next two weeks. In areas with a history of damage, 2-3 applications on a 28 day interval of a QoI fungicide like azoxyystrobin or pyraclostobin are recommended. Since this is a soilborne disease, these applications must be watered-in with 0.125 – 0.25” of irrigation. Additionally, manganese sulfate now at a rate of 2 lbs/A may help suppress this disease. Application of acidifying fertilizers has also been shown to suppress the disease, but at this time of year may also predispose Kentucky bluegrass to foliar diseases.

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<thead>
<tr>
<th>Spring 2” Soil Temperatures through 5/7.</th>
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<tbody>
<tr>
<td>A. Boothel - Portageville, MO</td>
<td>C. St. Louis - Williamsburg, MO</td>
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<tr>
<td>B. Springfield - Lamar, MO</td>
<td>D. Kansas City - St. Joseph, MO</td>
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<td>Date</td>
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<td>Soil Temperature (F)</td>
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<td><strong>Daily average</strong> &lt;br&gt; <strong>5-day average</strong> &lt;br&gt; <strong>Linear (5-day average)</strong></td>
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![Graphs showing soil temperatures at different locations](image-url)
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- **Aphid nymphs:** In late April, a manager of tall fescue in central MO observed general chlorosis throughout his turf stand. After a visit and taking a sample, no diseases were found, but numerous small nymphs were noted throughout and within the leaves and sheaths. The nymphs were aphids or greenbugs (*Schizaphis graminum*), which hatched and buried themselves within leaf sheaths. **Looking back**, aphid adult outbreaks were prevalent on lawns in central MO in mid April 2011 so the timing fits. Also, aphid predators such as ladybugs and ladybird beetles (which were noticed at this site) can keep greenbug populations in check and limit damage. In this case, however, the aphid populations may be popping first and damaging tall fescue through feeding and injecting toxic saliva. When present, restrict mowing affected areas as the aphids can be readily spread by equipment. If necessary, control includes spray applications of acephate, bifenthrin, lambda-cyhalothrin, or permethrin. Care must be taken with multiple applications of the pyrethroid insecticide class as some greenbug populations have developed resistance to this class of chemistry.

- **Billbug Captures:** Both hunting and bluegrass billbug captures are continuing in our traps in Columbia. If you had a confirmed case of damage on zoysiagrass in the past, consider preventive pesticide applications to target adults. **See the previous report for more information.**
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Warm-Season Turfgrass Greenup... or not?

This was a tough winter for plants in Missouri, just ask the arborvitae, rhododendron, and hollies. Stories from throughout the country are lamenting the demise of bermudagrass and, in some cases, zoysiagrass due to winterkill. This past winter was our coldest in the last 35 years, and a period in early January was particularly stressing with little snow cover and below zero low temperatures. Areas that may have been particularly impacted include those that were planted in 2013, on north facing slopes, or had poor drainage, heavy shade, or were trafficked during the winter.

Our NTEP bermudagrass trial was established last June, and is still pretty dormant (or dead) except for ‘Riviera’, which stands out with its greenery. This cultivar, however, is not displaying resistance to spring dead spot, as the amount of damage this year in one of our trial areas is considerably greater than in years past. Our zoysiagrass NTEP trial doesn’t look much better, however, ‘Meyer’, our old standby, is greening up ahead of the rest.

This being said, we are still in May and if the area is bermudagrass (particularly a cold tolerant variety) there may still be hope. We recently visited a site that had been sprigged last July with ‘Latitude 36’, one of the newer cold tolerant bermudagrass varieties. Green shoots were few and far between, and many areas (particularly trafficked and north slopes) appeared brown and barren. We did some digging and pulled back several of the long, mostly blond stolons. Most of them, had green or purple bases and would presumably still be alive to resume growth. It may take some time, but these areas may still recover if patience and warm, sustained spring temperatures will allow.
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Even though we’ve experienced some warmer temperatures of late, it’s important to realize it is still May. April temperatures oscillated wildly and weren’t particularly warm (actually ended right about average). An application of milorganite or topdressing with a dark compost material may serve to warm areas more quickly and allow for a better gauge of winterkill severity. In addition, a rake, very shallow aerification, or verticut may break up the tight layer of interwoven brown stolons and allow for further soil warming.

Still green at the base
This area, sprigged with ‘Latitude 36’ last July, is extremely brown and bare. However, the base sprig is still green and maybe just needs some time to recover. Yellow line indicates length of stolon.

Somehow, with all of this opportunity, the bermudagrass in my lawn still survived and is spreading into the mulch beds again. Sigh.

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