Weather

Holy smokes. This heat has us at least 3 weeks ahead of schedule this year, as trees and shrubs have been blooming all across campus. We have just had our 3rd warmest winter that is being followed up by a historically warm March. Currently, March 2012 is 2nd behind March 1974, but if forecasts hold we are well on pace to surpass that record. We are not alone, as this heat wave is gripping the entire Midwest and Northeast U.S. Try and grasp these staggering numbers of daily high temperatures tied or broken this week in U.S. cities: Monday – 138, Tuesday – 218, Wednesday – 457, and Thursday – 593! Today there are over 80 cities that are in the red zone, including Kansas City. Saint Louis would be there too if it weren’t getting pounded by rain.

Forecasts indicate a very good dose of rain next week too, with good chances almost every day totaling 1-4 inches throughout Missouri. Therefore, if you are going out targeting broadleaves next week, keep a healthy eye on the radar to keep the herbicide on the plant for as long as possible.

The major question is will we get a major arctic blast to halt this early spring growth? Fruit tree, grape, and bramble growers certainly hope not, while most of us turf growers wouldn’t mind the brief reprieve. Our state climatologist Pat Guinan informed me there is a large dense pocket of very cold air residing over Alaska that could deliver that frosty punch. However, the current models don’t show the jet stream dipping enough to bring the cold air to Missouri. So over the 6-10 days it appears that summer is here to stay. There is another chilling tidbit to add to the story though. In the record setting March of 1974, it dipped down to 0°F on March 24th, so winter may not be completely done yet.
Quick Hits:

- **Yellow Patch** We did have our first disease of the season come in to the lab this past week. Yellow patch (actually looks more reddish this time of year) caused by *Rhizoctonia cerealis* was sparsely observed on a few greens in central Missouri on 3/13. This disease, unless widespread and severe, normally disappears when bentgrass growth gets really cranking. In this case, the disease outbreak was very limited and shouldn't require treatment.

- **Is it time for pre-emergent crabgrass applications?** Yes, summer annual weeds have started to germinate in some areas in Columbia. Split applications are highly recommended this year with a suggested 8 week interval between application to try and make it to August. Several turf managers have commented on splitting into three applications to cover this larger window.

- **Is it time for Poa seedhead suppression?** Past-time. Forsythia started blooming hard and fast earlier this week outside my window, and soil temperatures (as you can see above) are through the roof. For you degree day trackers, we are at 130-150 base 50 degree days throughout Missouri.

- **Is it time for fungicide programs to start on bentgrass putting greens?** Well, that depends. I have not seen any dollar spot yet at the turf farm. Preventive DMI applications should start when 5 day average soil temperatures are 55-60°F, ([see report from last year](#)) which we are right on
March Madness & Avid for Nematode Control

the cusp of. However, I feel that if fairy ring is the target that next week may be too early to last the whole season, even with the 2nd application in mid April. Soil temperatures should moderate and be 55-60°F for an extended period, so it may be advisable to wait until the end of that window. That being said, if dollar spot prevention is a goal it may be best to go with an early shot of watered-in Honor (very good in preventive dollar spot trials) or Bayleton (best dollar spot DMI that I’ve tested) followed by two follow up DMI shots targeted for fairy ring in mid April and mid May. This would hit most of your soil pathogens preventively (except for Pythium) and stave off a potential early dollar spot outbreak.

Ring Nematode Control on Bentgrass Putting Greens

Large numbers of ring nematodes (Criconemella spp.) have been observed in samples of poorly performing bentgrass putting greens from Missouri and northern AK over the last two summers. Ring nematode populations can be sustained at high levels by many other plant and turf species. Stress reduction with proper cultural practices can help reduce symptoms.

Bentgrass putting greens, however, are a special case with the stresses of low mowing heights and the extraordinary summer heat of 2010 and 2011. Ring nematode feeding could easily have pushed bentgrass greens over the very fine edge, particularly in samples that had counts 2-7x times the action threshold population levels (see above). Lesions made by ring nematode feeding also make prime infection courts for many of the root diseases we observed in the last two years including Pythium root rot, take all patch, and summer patch. In spring sampling this year, the observed population levels in some greens are already a concern.
March Madness & Avid for Nematode Control

Historically, the nematicide Nemacur (fenamiphos) would be the standard for control, but in May 2008 the product went off the market due to its toxicity and the expense of continued registration. Nemacur supplies have since run out leaving superintendents with no recourse for control. In southeastern states, the fumigant Curfew (telone) has been implemented on some courses. The fumigant, although effective, must be applied by a certified applicator and carries a very high price tag. In addition, Curfew is only registered for use in AL, FL, GA, NC and SC, and is not available in Missouri. Other biological products on the market now, Econem and Nortica, are not effective on ring nematodes or are only labeled for warm season turfgrasses.

Until now, there was no recourse for Missouri superintendents. I have been able to work with the Missouri EPA to obtain a 24c Special Local Need (SLN) label for Avid 0.15EC (abamectin) use for ring nematode control on bentgrass putting greens. Abamectin is an insecticide used to control a variety of plant pests, and by homeowners for fire ant control. Avid has shown good nematode control in trials in OK, SC, and FL with no plant phytotoxicity and increased bentgrass root density and vigor. Avid is also has considerably less human and environmental toxicity than Curfew applications. Avid use is confined to use on putting greens with a demonstrated high population levels of ring nematodes. Testing can be done through the Plant Nematology Laboratory at the University of Missouri or other lab of your choosing. I will facilitate sample processing to the Mizzou lab. The cost is $20 per green, and please contact me for sampling instructions.

If you have high ring nematode populations and are interested in using Avid there are some very specific application instructions to follow.

- Rate: 57 fl oz/A = 1.31 oz/1000 sq ft
- Tank-mix with a nonionic surfactant
- Apply in the morning while the grass is wet with dew or irrigate lightly beforehand. (Go out before the mowers...)
- Lightly water in the application immediately with 0.1" of irrigation. If applying in less than 2 gallons water/1000 sq ft, make sure to water in quickly.
- If possible, use spray nozzles that produce an extremely coarse droplet size (i.e. TF5 or TTF10s).
- Three to four applications are recommended on a 14 d interval in the spring.
- The maximum number of applications is four.

You will note in the application instructions that it is critical to get the product into the target root zone quickly. Avid can get bound into organic matter and absorbed into plant tissue quickly if allowed to dry, so applying on wet turf (dew or residual
irrigation) is crucial along with immediate irrigation into the root zone. Additionally, tank-mixing with a wetting agent will facilitate movement into the soil profile. Please let me know if you need additional information regarding usage of this product.

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