Obey Your Mother

Weather

Did February ever stop? Spring has rolled into town with a thud. Punxsutawney Phil was correct in seeing his shadow and predicting six more weeks of winter, but perhaps he meant eight to ten? Temperatures have been very mild, which seems like an anomaly compared to the early springs we have experienced in the past five years. If we judge by the average March temperatures from 1981 – 2010, however, we are just about on average in much of the region (http://climate.missouri.edu/mcw/). This past winter (Dec – Feb) also was about on the long term 1895-2017 average of 32.1 F in Missouri. Temperatures are expected to remain cool to cold through the early half of April. So, enjoy the nostalgia, extra few weeks of limited grass growth, and mowing the just the tips off when the rain gives you the opportunity. Remember our MU Frost/Freeze Probabilities Guide, which indicates that our median date for a < 28 F occurrence (50% chance will occur after the designated date) for much of central Missouri is April 6th, and for < 32 F is April 15th. Combined with the forecast, holding off on planting the flowers a few more weeks would also be wise.

As indicated in the last update, February ended up as the wettest on record (since 1895), and March has followed suit, particularly in eastern MO and western IL. Some locations in Saint Louis and the eastern part of the state are two – three + inches above normal for the month, and will probably add to those totals with a wet forecast predicted. No foolin, there may even be a snow shower on April 1/ Easter. Grab a hot cup of coffee and make sure the kids have their boots on whilst searching for eggs Sunday.
Quick Hits

First Mow Shows Green, Purple & Unfortunate Beige
A. Our first mow last week shows purple biotypes in Penncross.
B. A bit of winter desiccation on the farm. Note open aeration holes didn’t help.

• Quite a few pictures of purple bentgrass have been sent in the last few days, and most of them seem to be segregates that just don’t know what to do with this extended winter weather pattern. The region has also experienced some considerably cloudy weather in the past two weeks, which is more than likely contributing to the off color. This being said, and as indicated in the previous update, this is also prime operating conditions for Microdochium patch, and doubtful areas should be incubated for investigation or sent in for diagnosis. 

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Rainfall Predominates in the East
A. Over the last month, rainfall has accumulated near STL and eastern IL. - Missouri Climate Center
B. Rainfall expected to continue into early April, sticking around in STL and eastern IL. - Source: NOAA CPS
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- Also in the above picture, some localized areas of dessication were noted on our bentgrass putting surfaces. Drought conditions of last fall/early winter are difficult to recall with the current rainfall pattern, but this dry period in December and January are likely to blame. The damage is not widespread and upon resumption of growth should recover fairly quickly. One aspect of note here is that we core-aerified and topdressed late last fall, leaving many of the holes still open. This potentially could’ve exacerbated these symptoms by drying out the area and exposing roots and crowns to freezing temperatures without their normal thatch blanket.

- Saying Pythium in late March is a sin, but the current rainfall pattern is a foreboding condition for putting greens with past Pythium root rot issues. It is too early and cool to put down a preventive now, but have a plan if similar rainfall events are forecasted a month from now. Cyazofamid (Segway) is still the workhorse of a preventive program. Rotate low rate cyazofamid applications with a QoI fungicide (Heritage, Insignia, Fame), fosetyl Al (Signature), and other Pythium fungicides to delay resistance issues.

Fairy Ring on Research Green
A. Type II green fairy rings evident on under fertilized research green.
B. After 48 h of incubation, white mycelium evident in top inch of soil profile.
C. Mycelium has clamp connections, indicating it’s a basidiomycete and fairy ring causing fungus.

- Type II green fairy rings were conspicuous on our newest research green last week. This four-year-old green has been infested the last two years, and summarily housed a few fungicide trials targeting control. Interestingly, the areas with these miniature fairy rings (not “mini ring”) are not in the same areas as our more severe summer outbreaks which occur along the the green margin. If currently observed on your greens, a bit of fertilization will mask it for now, but realize there is a potential monster sleeping underneath your bed.
Obey Your Mother (Nature)

“But my calendar says so Mommy!” Mother nature is having none of the early warm spring shenanigans that have occurred in the last five years, and the calendar of yesteryear is often rubbish when used in the blinding fluorescent lights of one’s square office. Many inquiries have recently been emailed/called/texted in wondering if we are in the window for pest control or even past the window. Well, outside my window, the skies are gray, the air is cool, and the forsythia has a few buds but doesn’t look interested in putting forth a bloom anytime soon.

Proper integrated (or best) management practices indicate that all the tools in the shed should be utilized to achieve pest control. This includes cultural practices (aerification, proper mowing height, fertilization, etc) that will curtail the conditions necessary for pest
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growth and health while increasing the plant’s health to stave off or tolerate the pest. Sometimes this is not enough, and a pesticide may be necessary to achieve economically (or oftentimes in our case aesthetically) satisfactory levels of control. When a pesticide is necessary, maximizing the intensity and duration of control will reduce overall number of applications and leave money in our wallet.

Nearly everyone has heard your father use the adage “a dull knife is a useless knife”. In many cases, the pesticide knife is sharper in the spring than at any other time of year. Pathogens, insects and weeds are just waking from their slumber along with the grass, and the pest life stage or population hasn’t grown yet to a problem causing level. Striking while the iron is hot means attacking a pathogen or insect at or before infection not symptom occurrence and managing a weed before it germinates or at worst when it is a struggling seedling.

One of the best resources for judging when to strike in our region is the growing degree day tracker managed by Dr. Kevin Frank at Michigan State (www.gddtracker.net). While gddtracker doesn't cover the entire country, the service does span across much of the Midwest. Growing degree days are accumulated heat units that drive biological processes, and in the spring they are critical for timing pest activity and associated pesticide intervention. In central and northern Missouri, the service indicates we are in the window for crabgrass preemergent applications and for control of Poa annua seedheads with Proxy/Primo combinations, and the forecast indicates we should remain so for at least another week. My forsythia concurs. Southern MO, south KS, and Arkansas should be applying in the next week, particularly if using a preemergent with no reach back potential for seedlings. For organic weed preemergent control with corn gluten meal, these same time periods apply since corn gluten meal also will only inhibit seed germination.

Soil temperatures are another way to gauge the progress of the spring season. Past reports have emphasized use of soil temperature data for timing of fungicide applications, particularly those made for control of soilborne diseases on golf putting greens. The above graphic which has been used for several years, charts two-inch soil temperature progress this spring and clearly shows soil temperatures have not touched the 55-60 F five-day average threshold for prevention of fairy ring and take-all patch. Additionally, crabgrass germination occurs when soil temperatures approach 55 F, making this window an important one for application timing.

We also have ongoing research investigating the impact of fungicide application timing on control of large patch of zoysiagrass. This study utilizes a five-day average two-inch soil temperature threshold of either 50 F or 60 F for timing. The last two years the 50 F threshold was reached and applications were made on March 6 and March 8. If it’s any indication as to the mild temperatures and restrictive nature of this cool spring, the 50 F application hasn’t been made and probably won’t until at least next week. Listening to Mother Nature this year is requiring some patience…