Preparing for Jack Frost

Weather

Despite a few dips here and there, October has turned out to be fairly mild temperature-wise, and with most weather station reporting at or very near normal monthly levels. Very short-lived frost may have occurred in northern regions such as St. Joseph, Kirksville, or Hannibal as air temperatures dipped to 33-35 degrees F last weekend, but no low temperatures at 32 F or below have been recorded yet this fall in Missouri. According to forecasts over the next 8-14 days, most areas in Missouri probably will not experience freezing temperatures until we reach November. As shown in the previous update, this fall could have the latest frost date in the last 8 years in Columbia, MO similar to the warm fall of 2004. It should be noted that the first 9 months of 2014 ranked as the 8th coolest on record, and several record lows in the upper 30's were set on September 13 (source: Dr. Guinan @ http://www.climate.missouri.edu).

Unlike the temperatures, precipitation has been anything but normal for most of Missouri. October is normally a fairly dry month, but, fueled by heavy rains in the first two days of October, precipitation totals are well above normal along the I-70 corridor. Most areas are 3-5” above normal for October, with Columbia at 7.41” above normal. This led to issues and nervousness regarding our neighbor farmers and crop harvest, and made it difficult for turf managers to mow, aerify, seed and fertilize during the first few weeks of October. Luckily, the precipitation has held off since mid October and it’s been relatively warm. This trend should continue, which
Preparing for Jack Frost

will allow us and the farmers to get back in the fields before Jack Frost decides to consistently nip at our nose.

The diagnostic lab has slowed down considerably with the advent of cooler temperatures. Below are just a few hints and reminders as the season closes and we transition into the winter and conference season.

**Warm season turfgrasses** are rapidly turning off color at the research farm and should be left to go softly into dormancy. Forecasted temperatures for this 2014-15 winter are conflicting, with the NOAA conservatively forecasting equal opportunities for a warm or cold 3 month span, and the farmers almanac and several other weather outlets forecasting a colder than normal winter. With the previous hard winter and the term “polar vortex” still firmly implanted in our heads, below are few reminders of the environmental factors that may raise the potential for winterkill in warm-season grasses.

- Winterkill is more prevalent in several environments, including north-facing slopes, high traffic, poorly drained, and shaded areas. Of these four, a turf manager may be best able to manage traffic in the short-term, and may be able to rope off or limit traffic on the particularly sensitive areas that were exhibited by the previous winter.
Preparing for Jack Frost

- Raise the mowing height slightly now on warm season turfgrasses to increase crown protection, and potentially allow leaf blades to penetrate through an ice event.

- Although a little late now, moderate fertilizer applications (0.5 lb N/1000 sq ft) every 2-4 weeks in September and October have been demonstrated to not induce winterkill in bermudagrass, but instead prolongs green color before dormancy and promotes earlier green up in the spring.

- Weed control: Herbicide applications targeting cool season weeds are commonly made to dormant warm season turfgrass. Some of these pre-emergent chemistries have extremely long residual activity, which considerably limits re-establishment options of winter-damaged turfgrasses the following spring. Pay attention to the label regarding reseeding, sprigging, and resodding intervals after these applications, and if there is any doubt as to how your warm-season turfgrass is faring this winter, err on the side of caution.

- Disease control: We are getting a bit late now in the fall season for fungicide applications targeting large patch of zoysiagrass, so if a second or even first is planned, it should be made soon. Single applications in the spring may be more beneficial than controlling the disease now on soon-to-be dormant turf. Fungicide applications targeting spring dead spot of bermudagrass should have been made earlier, with a second split application occurring within this timeframe. Remember, spring dead spot is a soilborne disease, and fungicides must be watered-in after application with 1/8-1/4” of irrigation.

Although foliar growth may be slowed now, cool season turfgrasses are in their prime, and it’s still time to make hay. (* As an aside, tall fescue hay is harvested much earlier in the year – late spring when near the early boot stage).

- Seeding: A central MO turf manager earlier in the week inquired if it was too late to seed. Mid-September – early October is the prime time to seed cool season turfgrass, but the earlier heavy rains may have cancelled out the latter portion of that window. Judging the forecast, I responded that it’s right on the edge, as current soil temperatures are in the mid 50’s and should be rising slightly in the short term. Waiting just a couple more days to seed, however, could result in an incomplete take and seedlings susceptible to winterkill. Another option is to dormant seed. Dormant seeding of tall fescue and Kentucky bluegrass is most effective when soil temperatures are consistently below 40F and there is little chance of germination until the next spring. Dormant seeding will require waiting until later in the season (preferably February - March), and higher seeding rates should be used to account for some attrition due to erosion and other factors. Also if seeding either now or as a dormant seed later, good
Preparing for Jack Frost

seedbed preparation (i.e. aerification), a protective layer of mulch, and raking afterwards will help enable a good take.

- Seedling care: Both warm and cool-season turfgrasses that are immature (< 1 year old) are more susceptible to winter injury. Pay particular attention to golf putting greens that were established this past spring, and monitor for drying out and potential desiccation of these young plants with limited root systems. It may be necessary during the winter to use a spray hawk to apply water to slopes and other dry areas.

- Fertilization is still on the table now for cool season turfgrasses whether it be a first or second application. Broadleaf weed control can also be best achieved during this timeframe as the plants take in carbohydrates to storage organs, and hopefully a herbicide right along with it. Remember to take care and read the label if planning to seed or dormant seed.

Conference Season

Halloween has almost arrived and it’s time to think about December (and not just Santa Claus). Three outstanding regional education conferences are planned this December with the Kansas Turfgrass Conference leading off from Dec. 2-4, our Missouri flagship conference, the Missouri Green Industry Conference occurring on Dec. 10th, and the Heartland Green Conference happening on Dec. 15-16th. Links to registration and some information for each conference are provided below.

Leadoff Hitter: 2014 Kansas Turfgrass Conference
Dates: December 2-4
Location: Topeka, KS
Speakers: Dr. Phil Harmon, Dr. Justin Moss, Dr. Casey Reynolds, Dr. Brad Fresenburg, and the KSU Team

Slugger: 2014 Missouri Green Industry Conference
Date: December 10
Location: St. Charles, MO
Speakers: Dr. Shawn Askew, Dr. Todd Lasseigne, Jerad Minnick, and the MU Team

Cleanup: 2014 Heartland Green Industry Expo
Date: December 15-16
Location: Overland Park, KS
Speakers: TBA and various from both the MU and KSU teams.

Have a great weekend, and go Royals!
Preparing for Jack Frost

Lee

Lee Miller
Follow on Twitter!
@muturfpath
Extension Turfgrass Pathologist
University of Missouri