

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 20, 2018**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2018 growing season with comparisons to the previous six years. A base temperature of 32 degrees F will be used for ryegrass (T-Base = 32 F). Reported GDD are based on the total accumulation from the beginning of the calendar year to the current date.

- Year to date, GDD = 1,519 (Table 1)
- Average temperatures for the third week of June, high of 74 F and low 49.7 F
- Average GDD accumulation for fourth week of June = 212 (30.3/day)
- Current 10 day forecast projects daily highs in the mid 80's and lows in the high 50's
- Projected 10 day GDD = 407 (40.7/day)
- Current 10 day forecast continues to projects warmer than average temperatures (+10.4 GDD/day)

Table 1. Growing degree days (GDD), March - June 2012 to March - June 2018 near Roseau MN.

Year	2018	2017	2016	2015	2014	2013	2012	2018 vs. 17
March	0	90	38	119	0	0	304	-90
April	184	258	263	367	159	80	370	-74
May	815	679	765	659	654	640	726	+136
June		917	945	941	964	975	979	
June 1-17	520							
Total	1,519	1,944	2,011	2,086	1,777	1,695	2,379	
*June 18-27	407							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Ryegrass fields that had healthy crowns this spring are heading and will soon be shedding pollen. Pollen shed begins with the most mature ryegrass plants, followed by the tillers. Pollen shed should begin later in the week and will continue for a couple weeks. Ryegrass typically sheds pollen in mid-morning. Ryegrass pollen clouds look similar to the dust from vehicles when driving on gravel roads. Ryegrass sheds pollen generally after the dew lifts for the day and will continue for a couple of hours in the morning.

SUMMER GRASS SEED FIELD TOUR - JUNE 27

Mark your calendar for the annual grass seed summer tour. The tour this summer is scheduled for 5:00 pm on Wednesday, June 27th at the U of MN Magnusson Research Farm. Directions to the Magnusson Research Farm; from the intersection of Hwy 11 and 89 travel approximately 2 miles north on Hwy 310, turn left (west) off Hwy 310 onto Roseau County 16 and for approximately 3 miles. The farm is located on the north side of Hwy 16.

PEST MANAGEMENT

Rust in ryegrass

The USDA-ARS tracks rust development and movement from the Gulf of Mexico to the northern plain states. The graphic below is from the USDA web site and illustrates the movement of rust from south to north in the United States. This movement of rust has been termed the Puccinia Pathway. Thus far in 2018, leaf rust has NOT been detected in MN. Field scouting continues to monitor and track the progress of rust as it moves northward. For additional information see the link below for the Cereal Rust Bulletin. The link to this site: (<http://www.ars.usda.gov/mwa/cdl>)



Historically, in northern Minnesota environments, crown rust has been observed after approximately 1,500 GDD and leaf and stem rust at 1,900 GDD. Year to date, we have accumulated 1,519 GDD (Table 1). We are in the window of time for potential crown rust development in perennial ryegrass. Crown rust usually is not a major disease problem in ryegrass, but can be observed in isolated fields. However, leaf and stem rust is a much different situation as this pathogen can cause significant seed yield losses when environmental conditions are favorable for this disease. The most recent 10 day forecast indicates an accumulation of 40.7 GDD/day, if this forecast holds, we have the potential to see leaf and stem rust in approximately 10 days. If we experience warmer than normal weather, with southerly winds, this timeline will shorten and if we are cooler than normal, with northerly winds, will lengthen this timeline. To summarize, perennial ryegrass is susceptible to two different rust diseases, crown rust which has an orange cast compared to the red color of leaf and stem rust. Of the two diseases, leaf and stem rust has the potential to cause more economic damage than crown rust.

Rust spores that move into the area from the Gulf of Mexico got a slower start this year, thanks to a cold winter for most of the U.S. With the recent warm weather and southerly winds, rust spores can move long distances in a few days.

Strategies for rust control in ryegrass post heading are:

- 1) Scout ryegrass fields for rust every two- to- three days. In favorable environmental conditions rust can increase rapidly and this fungal pathogen can “explode” in just a few days.
- 2) If a fungicide has been applied with a previous trip across the field, apply a fungicide when the last applied fungicide is about to “run out”. The number of days of disease protection will depend upon the fungicide used and product rate.
- 3) Spray a fungicide after the accumulation of 1,900 GDD. Historically, leaf and stem rust occurs at approximately 1,900 GDD. A full rate of a fungicide will provide rust protection for 21 to 28 days. A fungicide applied at 1,900 GDD should provide disease protection until ryegrass swathing (approximately 2,800 GDD).

Next week’s newsletter will be released on June 27th, 2018.