

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 28, 2022**

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's (from snow melt to swathing) will be tracked in the 2022 growing season with comparisons to the previous six years. A base temperature, T-Base = 32 degrees F, will be used for perennial ryegrass.

- Year to date GDD = 1,577 (Table 1)
- Last week (June 20 - June 26) accumulated GDD = 259; the long term average = 212
- Projected GDD for the next 10 days = 346, or 34.6/day (Table 1)
- Average GDD for the first week of July = 230, or 32.9/day
- The 10 day forecast suggests warmer than average temperatures for the first week of July as the projected GDD is 34.6/ day vs the long term average of 32.9/day.

Table 1. Growing Degree Days (GDD), March - June 2016 to March - June 2022 near Roseau MN.

Year	2022	2021	2020	2019	2018	2017	2016	2022 vs. 2021
March	0	131	30	0	0	90	38	-131
April	95	236	183	211	184	458	263	-141
May	649	640	600	548	815	679	765	+9
June 1-26	833							
June		1,007	995	919	1,007	917	945	
Total		2,014	1,808	1,678	2,006	2,144	2,011	
*June 27-July 6	346							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The ten day forecast indicates a continuation of the warming trend of the last couple weeks. Projected GDD are over 34/day and will promote growth and development of perennial ryegrass, weeds, diseases and insects. Armyworm moths and leaf and stem rust are two potential pest problems that are carried into the ryegrass production region of northern MN by southerly winds. Armyworm traps have documented armyworm moths in perennial ryegrass fields and based on historical records are just entering the window for the potential for leaf and stem spores to be transported into the area. Field scouting will determine current status of potential pest challenges in perennial ryegrass seed fields. Perennial ryegrass fields that had healthy crowns this spring began shedding pollen over the weekend. In perennial ryegrass, plants typically shed pollen mid-morning and will continue for several hours. Pollen clouds were observed moving across fields in the last few days. When perennial ryegrass is shedding heavy pollen it looks like dust from vehicles driving on gravel roads

SUMMER GRASS SEED FIELD TOUR – JUNE 29

The annual grass seed summer tour is scheduled for June 29th with the field tour to begin at 5pm at the U of MN Magnusson Research Farm. Directions to the U of MN Magnusson Research Farm. At the intersection of MN Hwy 11 and 310, proceed north on MN 310 for approximately 2 miles, turn left (west) on Roseau County 16 and proceed west for approximately 3 miles. The U of MN Research Farm is located in the north side of Roseau County 16.

CROP MANAGEMENT

The USDA-ARS tracks rust development and movement from the Gulf of Mexico to the northern plain states. As of the end of May, light infections of rust was visible on barberry in SE MN. Barberry is an alternate host for rust that infects wheat and other grasses. Field scouting will continue 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>).

In northern MN environmental conditions, crown rust has been observed after 1,500 and leaf and stem rust after 1,900 GDD. The new 10 day forecast indicates that we will be in the window for potential leaf and stem rust infections in perennial ryegrass. Rust spores travel on low level jet stream winds from southern states into the perennial ryegrass production areas of northern MN. Perennial ryegrass is heading and will soon exhibit full head extension. To maximize perennial ryegrass seed yield it's important to protect the entire ryegrass seedhead from diseases that can reduce the photosynthetic area of the seedhead. The following are strategies for rust control in perennial ryegrass post heading.

- 1) Scout ryegrass fields for rust a couple times a week as in favorable environmental conditions rust can develop and increase rapidly and this disease can “explode” in a few days.
- 2) If a fungicide has been applied with a previous trip across the field, apply a fungicide when the last fungicide is about to “run out”. The number of days of disease protection will depend upon the fungicide used and product rate.
- 3) Apply a fungicide when the ryegrass seedhead is fully extended. A full rate of a fungicide applied at full head extension should provide protection for 21 days. The new 10 day forecast indicates that we will have accumulated over 1,900 GDD by the end of first week of July. Historically, ryegrass swathing will begin after the accumulation of 2,700 to 2,800 GDD. If we assume an average of 35 GDD/day for July we should reach 2,700 GDD by the end of July. A full rate of Priaxor or Quilt Excel applied at full head extension should provide disease protection until swathing.

PEST MANAGEMENT

Armyworms

In 2022, an armyworm trapping project has documented three flights of moths into the perennial ryegrass production region of northern MN. Perennial ryegrass fields appear to be a preferred crop for armyworm moths as traps in ryegrass fields have captured more moths than traps in other crops.

Pheromone trap capture data in 2022 from five traps:

May 28-30 = 49

June 10-13 = 45

June 18-20 = 54

Moth trapping will continue into the first couple weeks of July. Previous research suggest 30-40 days from moth capture to the beginning of the 6th instar stage. Field scouting will determine level and intensity of armyworm larvae.

Grasshoppers

Limited numbers of grasshoppers have been observed in perennial ryegrass fields in 2022. Field scouting will continue to monitor for this potential pest of perennial ryegrass.

Next week's newsletter will be released on July, 5th