

**MINNESOTA TURF SEED COUNCIL  
NEWSLETTER  
July 9, 2024**

**PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)**

Perennial ryegrass GDD's will be tracked in the 2024 growing season with comparisons to the previous seven years. The accumulation of GDD's will begin after the snow has melted from the perennial ryegrass fields and continue through swathing. A base temperature of 32 degrees F is used for perennial ryegrass (T-Base = 32 F).

- Year to date GDD = 2,035 (Table 1)
- GDD last week (July 1 - 7) = 227; Long term average = 230
- GDD projected in next 10 days = 407 or 40.7/day (Table 1)
- Average GDD for the second week of July = 243 or 34.7/day
- The ten-day forecast suggests warmer than average temperatures for the middle of July. Projected GDD is 40.7/day compared to the long-term average of 34.1/day.

Table 1. Growing Degree Days (GDD), March - July 2017 to March - July 2024 near Roseau MN.

Year	2024	2023	2022	2021	2020	2019	2018	2017	2024 vs. 2023
March	0	0	0	131	30	0	0	90	0
April	296	93	95	236	183	211	184	458	+203
May	653	959	649	640	600	548	815	679	-306
June	859	1,064	959	1,007	995	919	1,007	945	-205
July 1-7	227								
July		985	1,104	1,174	1,179	1,067	1,100	1,123	
Total		3,101	2,807	3,188	2,987	2,745	3,106	3,233	
*July 8-17	407								

\* Forecasted GDD at Roseau for the next 10 days.

**GENERAL CROP CONDITION**

Heavy pollen shed was observed in perennial ryegrass fields last week. The next critical stage in perennial ryegrass growth and development is the seed filling stage. As mentioned in previous newsletters, to maximize seed fill and test weight it's important to protect the entire seedhead with a fungicide to control rust and other fungal diseases. Last week low levels of rust were observed at the U of MN Magnusson Research Farm in areas that did NOT receive a fungicide treatment in the 2024 season. Areas that had a fungicide applied looked to be disease free.

Perennial ryegrass fields will be ready to swath in a few weeks. The data in Table 2 is from Oregon and indicates that swather choice can make a difference in seed shattering in perennial ryegrass seed fields. The choice of swather type could be an important management decision in 2024 with the variable perennial ryegrass stands.

## **CROP MANAGEMENT**

Table 2. Perennial ryegrass seed yield and seed loss from various swather types operated in on-farm strip trials in Oregon. N.P Anderson, M. Goussard and B. Donovan, 2018.

Swather Type*	Seed Yield	Seed Loss	Seed Loss
	(#/acre)	(#/acre)	(%)
MD Single Auger	2,465 b	712 b	28.6 b
JD Double Auger	2,182 a	763 b	34.3 b
MD Draper	2,516 b	453 a	17.3 a
JD Rotary Disc	2,356 ab	630 b	27.6 b

\*MD = MacDon; JD = John Deere

The above data was collected from on-farm strip trials conducted in Oregon and is the average of two sites. Data was collected on the day the farmer cooperators would swath the field. Average seed moisture at swathing was 21.4%. The data collected, averaged over the two sites, suggest a difference in seed yield and seed loss based on the type of swather used in perennial ryegrass. Data is limited from various swather types in perennial ryegrass grown the environmental conditions of MN. Several considerations for swathing the 2024 perennial ryegrass seed crop include:

- As swather width is reduced a short ryegrass plant may not produce a windrow that can be efficiently picked up with the combine
- The lack of biomass from gaps in the field will result in more movement of the ryegrass plant from the swathing operation, especially when traveling at speeds over 10 mph which will increase seed shatter.
- The lack of dew in the morning will result in more seed shatter, especially with more aggressive cutting operations.
- Ryegrass seed shatter increases as seed moisture moves from the mid-30's into the 20's.
- Wider swather widths, when operated at lower speeds, will produce a window that should be more efficiently picked up with the combine.

## **PEST MANAGEMENT**

### **Armyworms**

Field scouting has identified pockets of low levels of armyworm larvae of various stages. The recent thunderstorms that have moved through the area have resulted in lodged areas in fields. These lodged areas coupled with the damp conditions in the perennial canopy makes for an ideal situation for armyworm development. Field scouting will determine 1) the level of armyworm larvae in perennial ryegrass fields and, 2) if an insecticide treatment is warranted.

### **Rust**

Low levels of crown rust and leaf and stem rust have been observed in areas at the U of MN Magnusson Research Farm that did NOT receive a fungicide treatment. The number of days since the last fungicide application and the product used and rate will determine if a sequential fungicide treatment will be needed to protect the ryegrass seedhead through swathing.

Next week's newsletter will be released on July 16<sup>th</sup>.