

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 2, 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 = 1,808 (Table 1)
- GDD last week (June 24 - 30) = 198; Long term average = 212
- GDD projected in next 10 days = 344 or 34.4/day (Table 1)
- Average GDD for the first week of July = 230 or 32.9/day
- The ten-day forecast suggests warmer than average temperatures for the beginning of July. Projected GDD is 34.4/day compared to the long-term average of 32.9/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		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 1-10	344								

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Accumulated GDD in June of 2024 was -205 compared to June of 2023 and -113 compared to the six-year average. If we use an average of 30 GDD/day the -113 GDD would be approximately (3.8 days) days behind the six-year average without including June of 2023 was an outlier of 1,064 GDD vs the six-year average of 972. The near-term forecast for early July points to warmer than average temperatures.

In the last few days pollen clouds have been observed moving across spring seeded perennial ryegrass fields. This observed pollen clouds coupled with cooler than average temperatures should be a positive for seed set and filling of the ryegrass seedhead.

CROP MANAGEMENT

Crown or leaf and stem rust has not been observed in areas at the U of MN Magnusson Research Farm that did not receive a fungicide treatment in 2024. Field scouting will continue in these areas to determine when leaf rust infections are observed in perennial ryegrass in the 2024 season. Crown rust pustules are orange in color while leaf and stem rust are red in color. In northern MN conditions we typically can see Crown rust after 1,500 and leaf and stem rust after the accumulation of 1,900 GDD.

The USDA-ARS tracks rust development and movement from the Gulf of Mexico to the northern plain states. As of June 14, crown rust was observed in buckthorn at the U of MN St. Paul campus. Buckthorn is an alternate host for rust that infects wheat and other grasses. Common barberry is an alternate host for leaf rusts and light infections were observed in SE Mn in early June. For additional information on the movement of rust from southern states into Minnesota the attached link will provide this information. The link for the Cereal Rust Bulletin: (<http://www.ars.usda.gov/mwa/cdl>).

PEST MANAGEMENT

Armyworms

In 2024, armyworm moth pheromone traps were placed at six locations in the perennial ryegrass growing regions of NW MN. Total moth capture from the six traps is listed below:

May 20 = 128

May 26 = 118

June 1 = 60

June 6 = 175

June 12 = 98

June 18 = 55

June 24 = 54

June 30 = 42

A summary of the moth capture data indicates that May 20, May 26, June 6, and June 12 had the highest recorded moth capture. These dates corresponded with low level jet streams that blow moths into northern MN from the south. In addition, dates with the most moth capture also experienced thunderstorms and rain events that tend to drop the adult moths from the low-level jet streams. Field scouting has identified pockets of low levels of armyworm larvae of various stages. Why do we see worms of various sizes? The answer will depend upon when the adults moth arrives and lays eggs. Last week armyworm low levels of armyworm larvae from 1/8 to approximately one inch long was observed. The good news is these worms were observed in sporadic areas of fields (lodged ryegrass and around shelterbelts and tree groves. Field scouting will determine the level of armyworm larvae in perennial ryegrass fields.

Next week's newsletter will be released on July 9th.