

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 6, 2023**

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's will be tracked in the 2023 growing season with comparisons to the previous six 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 = 1230 (Table 1)
- GDD last week (May 22-28) = 295; Long term average = 177
- GDD projected in next 10 days = 392 or 39.2/day (Table 1)
- Average GDD second week of June of May = 186 or 26.6/day
- The ten-day forecast suggests warmer than average temperatures for the second week of June. Projected GDD is 39.2/day compared to the long-term average of 26.6/day.

Table 1. Growing Degree Days (GDD), March - June 2017 to March - June 2023 near Roseau MN.

Year	2023	2022	2021	2020	2019	2018	2017	2023 vs. 2022
March	0	0	131	30	0	0	90	0
April	93	95	236	183	211	184	458	-2
May	959	649	640	600	548	815	679	+310
June 1-4	178							
June		959	1,007	995	919	1007	945	
Total		1,703	2,014	1,808	1,678	2,006	2,172	
*June 5-14	392							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The extended warm weather has pushed perennial ryegrass growth and development. Weather records indicate that we have experienced more 90-degree days in May of 2023 than for an entire average year. GDD accumulation for 2023 is running about two weeks ahead of 2022. The new 10-day forecast suggests a continuation of the above average temperatures with the projected GDD accumulation of 39.2/day compared to the long-term average of 26.6/day. With the forecast warm temperatures look for spring seeded perennial ryegrass fields to be heading this week with pollen shed right around the corner.

ISOLATION STRIPS IN GRASS SEED CROPS

Many grass seed fields require an isolation strip in the certification process. Kris Folland is the local Field Supervisor with the Minnesota Crop Improvement Association (MCIA). If you have questions or concerns, please contact your grass seed agronomist, seed conditioner or Kris with MCIA (218-791-2156).

SUMMER GRASS SEED FIELD TOUR – June 28

The annual grass seed summer tour is scheduled for June 28th and will be held at the U of MN Magnusson Research Farm. More details will follow in future newsletters.

CROP MANAGEMENT

With the projected warm temperatures this week many perennial ryegrass fields will be in the proper timing for an application of a growth regulator. In the growing conditions of northern Minnesota, perennial ryegrass biomass production has ranged from less than a ton to over four tons/acre. Some year's biomass production would be classified as "thin line" growth and others would be more of "lush," or even classified as rank growth. Many perennial ryegrass fields in 2023 would be considered to have more fields with "thin line" than "lush" growth. Even in years of thin line growth previous U of MN research would indicate that the application of a plant growth regulator will produce a positive response in perennial ryegrass seed yields. However, the application of the growth regulator may have to be delayed until the ryegrass plants have more vertical growth. Check with your agronomist for local experience.

U of MN Research Reports are available on the web: <https://turf.umn.edu/seed-production-newsletters>.

PEST MANAGEMENT

Armyworm moth pheromone traps in the ryegrass production areas of northern MN documented a third flight of armyworm moths in 2023. Armyworm moth capture on June 4-5 totaled 195 moths (30 moths/trap) were captured in seven pheromone traps in ryegrass production fields. This is the highest number of moths captured in a two-day period since the beginning of this armyworm trapping project which began three years ago. Research data is limited to the correlation of moths captured in a trap and the infestation levels of armyworms larvae that feed on the crop. However, it takes about 8-10 days for the eggs to hatch (eggs tolerant to insecticides) and about 3 to 4 weeks for the armyworm caterpillar to pass through six instar stages. With the heat we have experienced armyworms will pass through these growth stages at a more rapid pace. Field scouting in mid-June will determine the level of armyworm caterpillars in perennial ryegrass fields.

The most recent Cereal Rust Bulletin (5/26/23) indicates elevated levels of wheat rust in Oklahoma. Rust begins in the Gulf states and moves into Minnesota on southerly winds. Two leaf diseases that can infect perennial ryegrass are leaf and stem rust and crown rust. Barberry is an alternate host for leaf and stem rust and buckthorn is an alternate host for crown rust. More on perennial ryegrass leaf diseases in future newsletters.

Next week's newsletter will be released on June 13th.