MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 4, 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 = 1,008 (Table 1)
- GDD last week (May 27 - June 2) = 188; Long term average = 175
- GDD projected in next 10 days = 293 or 29.3/day (Table 1)
- Average GDD for the first week of June = 177 or 25.3/day
- The ten-day forecast suggests warmer than average temperatures for the second of June. Projected GDD is 29.3/day compared to the long-term average of 26.6/day.

Table 1. Growing Degree Days (GDD), March - June 2017 to March - June 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 1-2	59								
June		1,064	959	1,007	995	919	1,007	945	
Total		2,116	1,703	2,014	1,808	1,678	2,006	2,172	
*June 3-12	293								

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The temperatures last week were warmer than average, and the rain mid-week coupled with the windy conditions made it a challenge for field spraying. Spring seeded perennial ryegrass with healthy crowns this spring are just beginning to have heads visible. Fall seeding and fields with significant winter injury are a couple of weeks behind the spring seeded ryegrass with healthy crowns. Look for spring seeded perennial ryegrass with healthy crowns this spring to be well into heading by the end of this week.

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).

CROP MANAGEMENT

With the projected warm temperatures later 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 2024 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.

PEST MANAGEMENT

Aster leafhoppers were observed in several fields last week. Aster leafhoppers are a vector of aster yellows, a disease of canola, flax, and cereal crops (barley, oats, and wheat). The last year of significant aster leafhopper infestation was 2012. Data is limited on aster leafhopper feeding and aster yellows in perennial ryegrass seed fields. Recent low level jet streams and south winds have carried a flush of army worm moths and other pests (aster leafhoppers) to northern Minnesota. In the last six days the armyworm moth trapping project collected a total of 53 (average of 8.8 moths/trap) last week. The range was a low of 7 to a high of 18 moths/trap. The year-to-date total capture in the six traps:

- 6-1 = 53
- 5-26 = 115
- 520 = 128

The reported moth capture is from the previous five or six days. 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 6 instar stages.

Data from Guppy indicates that armyworm caterpillar instar stages 1-4 account for only 6% of the feeding damage, instar stage 5 (up to 3/4-inch-long worms) approximately 15% and instar stage 6 (up to 1.25 inch) approximately 80% of the feeding damage. Field scouting will determine armyworms stages and infestation levels. The current economic threshold for larger armyworms caterpillars in grass crops is 4-5 larvae/square foot in the vegetative stage.

SUMMER GRASS SEED FIELD TOUR – June 27

The annual grass seed summer tour is scheduled for the late afternoon of June 27th and will be held at the U of MN Magnusson Research Farm. Additional details will follow in future newsletters.

HYBRID RYE FIELD TOUR – June 27

A hybrid rye field tour is scheduled for the morning of June 27th at the U of MN Magnusson Research Farm. More details will follow in future newsletters.

Next week's newsletter will be released on June 11th .