

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 31, 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 = 692 (Table 1)
- Last week (May 23 - 29) accumulated GDD = 195; the long term average = 175
- Projected GDD for the next 10 days = 255, or 25.5/day (Table 1)
- Average GDD for the end of May = 175, or 25/day
- The 10 day forecast suggest a continuation of average temperatures for the first week of June as projected GDD 25.5/ day vs the long term average of 25.3/day.

Table 1. Growing Degree Days (GDD), March - May 2016 to March - May 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 1-29	597							
May		640	600	548	815	679	765	
Total		1,007	813	759	999	1,227	1,066	
*May 30-June 8	255							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Perennial ryegrass fields with healthy crowns this spring are in the late tillering to early jointing stage. After the snow melted most ryegrass fields were green. However, the cold snap for several weeks in March into April resulted in many fields that had mild to severe leaf desiccation. Plants with healthy crowns had more carbohydrate storage and as a result were able to regrow from the crown. Fields that had a small crown this spring (fall seed and volunteer fields) have more stand variability and winter kill issues than spring planted ryegrass (wheat stubble height is an important factor). Additional time will be required to fully assess the degree of winter survival and stand variability in these fields.

CROP MANAGEMENT

If nitrogen has been applied and is in the root zone, ryegrass plants should be a deep green color with vigorous growth. Perennial ryegrass plants that are not tillering, or showing a pale green color could indicate nutrient stress. If spring nitrogen has been applied, but plants remain yellow with non-vigorous growth, plant applied nitrogen may not be in the root zone, some of the applied nitrogen may have been lost, or could indicate a sulfur deficiency.

With ryegrass beginning to joint in spring seeded ryegrass fields, growth regulator timing is right around the corner. Apogee and Palisade are growth regulators labeled for use in perennial ryegrass. The following conclusions are based on small plot replicated research with growth regulators in perennial ryegrass over the last decade:

- The application of a growth regulator will result in increased perennial ryegrass seed yield of 150-300 pound/acre compared to the untreated
- Growth regulators will reduce plant height by 2 to 8 inches compared to the untreated
- Growth regulators in perennial ryegrass reduce lodging and keep plants upright which improves seed set during pollination and improves the swathing operation
- Previous research in MN has indicated that plant growth regulators should be applied to perennial ryegrass seed production fields in the late boot to early heading stage
- Palisade performance will be reduced if the weather turn cool.
- Apogee rate of 6-8 oz/acre and Palisade at 1 to 1.5 pt/acre are recommended with a full ryegrass stand. If ryegrass has thin line growth, plant growth regulator rate can be reduced by 20-40%
- A single additive, nonionic surfactant at 0.25% v/v is recommended with Palisade
- With Apogee, two additives are recommended, a nonionic surfactant at 0.25% v/v and nitrogen either 28%, or AMS at 2.5% v/v. Recent U of MN research has indicated a positive ryegrass seed response from additional nitrogen (2 - 3 gallons/acre of 28%, or up to 7# AMS, 2-3 gallons/acre) with a nonionic surfactant.
- A double additive is not recommended with Palisade as crop injury may result in certain environmental conditions (hot, dry)

Grass Seed Survey

Dr. Eric Watkins, U of MN Turf scientist, is asking for assistance from grass seed growers to complete a survey (link below). This grass seed survey has a multi-state focus and is requesting input from grass seed growers. Thanks to those growers who have already fill out and returned the survey. Dr. Watkins has indicated that a few more surveys would be appreciated. If you have questions or want further clarification, Dr. Watkins can be reached by phone; 612-624-7496, or Email ewatkins@umn.edu.

https://umn.qualtrics.com/jfe/form/SV_abLo9DYlml8cGZE

PEST MANAGEMENT

A total of 22 armyworm moths were captured in pheromone traps during in the last full week in May. This is about a week later than last year for the capture of multiple moths (an average of more than one moth/night). Research data is limited on the correlation of moths captured in a trap and the infestation levels of armyworms larvae that feed on the crop. Previous research in Ontario suggests it takes 30-40 days from moth flights and egg laying to the beginning of the 6th instar stage. The 5th and 6th instar stage in armyworms cause the most damage. Field scouting will determine the level of armyworms larvae in perennial ryegrass fields. The current economic threshold for armyworms in grass crops are 4-5 larvae/square foot. Additional information on armyworms will follow in future newsletters.

U of MN and MN Turf Seed Council Summer Field Day

Mark your calendars for June 29. More information will follow in future newsletters.

Next week's newsletter will be released on June, 7th.