

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 13, 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 = 1,473 (Table 1)
- GDD last week (June 5-11) = 243; Long term average = 186
- GDD projected in next 10 days = 402 or 40.2/day (Table 1)
- Average GDD third week of June = 197 or 28.1/day
- The ten-day forecast suggests warmer than average temperatures for the third week of June. Projected GDD is 40.2/day compared to the long-term average of 28.1/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 1-11	421							
June		959	1,007	995	919	1007	945	
Total		1,703	2,014	1,808	1,678	2,006	2,172	
*June 12-21	402							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The ten-day forecast indicates a continuation of the warming trend that began in mid-May as the projected GDD are over 40/day. Perennial ryegrass fields are heading and will soon be shedding pollen. Perennial ryegrass plants typically shed pollen mid-morning and pollen clouds can be observed moving across fields. When perennial ryegrass is shedding heavy pollen, it looks like dust from vehicles driving on gravel roads.

SUMMER GRASS SEED FIELD TOUR – June 28

The annual grass seed summer tour is scheduled for June 28th with the field tour to begin at 5pm at the U of MN Magnusson Research Farm. Directions to the U of MN Magnusson Research Farm. At the intersection of MN Hwy 11 and 310, proceed north on MN 310 for approximately two miles, turn left (west) on Roseau County 16 and proceed west for approximately three miles. The U of MN Research Farm is located on the north side of Roseau County 16. Information on specific field tour stops will follow in future newsletters.

CROP MANAGEMENT

Several questions have been asked about late season broadleaf weed control in perennial ryegrass. Research conducted at the U of MN Magnusson Research Farm indicates that headed perennial ryegrass is tolerant to many broadleaf herbicides. The data set in Table 2 is from research conducted in 2012. Herbicides were applied to ‘Arctic Green’ that was 60% headed with minimal weed pressure.

Table 2. Late season broadleaf weed control applied to ‘Arctic Green’ perennial ryegrass at the U of MN Magnusson Research Farm in 2012

Treatment	Rate/acre	Seed Yield (#/acre)	Seed Yield (% of untreated)
MCPE	1-pint	1433	107.8
2,4-D amine	1-pint	1439	108.3
Aim	1 oz + 0.25% NIS	1350	101.6
2,4-D+Clarity	1+1pint	1320	99.3
Basagran	1.5 pint +1%MSO	1302	98.0
2,4-D ester	0.75-pint	1299	97.7
Stinger	6 oz	1296	97.5
Clarity	1-pint	1252	94.2
Untreated		1329	100
LSD (0.05)		137	10.3

PEST MANAGEMENT

Grasshoppers

Grasshopper nymphs have been observed in perennial ryegrass fields. The above average temperatures in May resulted in an early emergence of grasshoppers. The first place to see grasshopper nymphs are on field edges as ditches and grassy areas are the preferred locations for grasshoppers to lay eggs. If seagulls are flying around a ryegrass field, armyworm larvae or grasshoppers may be at a level that may require insecticide treatment. Field scouting will determine actual infestations.

Crown Rust and Leaf & Stem Rust

The 2023 season has accumulated enough GDD’s for crown rust infections in perennial ryegrass. 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. Previous fungicide research in perennial ryegrass is available on the web:

<https://turf.umn.edu/seed-production-newsletters>.

Armyworms

Thus far in 2023, an armyworm trapping project has documented three moth flights into the perennial ryegrass production region of northern MN. Moth flights are about 10 days earlier in 2023 than 2022. Pheromone trap capture data in 2023 from seven traps:

May 19-23 = 43

May 29-31 = 26

June 4-6 = 195

Remember most insecticides have limited activity on armyworm eggs. On average it will take 7-10 days after moths’ mate to lay eggs. The larvae go through six instar stages over a two-week period. Expect to see armyworm larvae the third week of June from the flight that occurred on June 4-6.

Next week’s newsletter will be released on June 20th.