

**MINNESOTA TURF SEED COUNCIL  
NEWSLETTER  
May 7, 2024**

**PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)**

Perennial ryegrass GDD's will be tracked in the 2024 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 = 371 (Table 1)
- GDD last week (April 29 - May 5) = 89; Long term average = 104
- GDD projected in next 10 days = 243 or 24.3/day (Table 1)
- Average GDD for the second week of May = 124 or 17.7/day
- The ten-day forecast suggests warmer than average temperatures for the second week of May. Projected GDD is 24.3/day compared to the long-term average of 17.7/day.

Table 1. Growing Degree Days (GDD), March - May 2017 to March - May 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 1-5	75								
May		959	649	640	600	548	815	679	
Total		1,052	744	1,007	813	759	999	1,137	
*May 6-15	243								

\* Forecasted GDD at Roseau for the next 10 days.

**GENERAL CROP CONDITION**

The yellow flower of dandelion was observed late last week. This is a reminder that winter annual weeds move quickly from the rosette stage to full bloom. If a broadleaf herbicide was not applied last fall ryegrass these fields should be scouted to determine the infestation levels of winter annual weeds.

**Lake of the Woods – Ice-Out Date**

The date when lakes are free of ice (ice-out date) is an indication of the “earliness” or “lateness” of spring. In 2024, the ice-out date on Lake of the Woods was April 28<sup>th</sup> which is six days earlier than the median date of May 3<sup>rd</sup> (Table 2). The earliest recorded ice-out date is April 8<sup>th</sup> in 2012. The latest ice-out date was recorded on May 21<sup>st</sup> in 2014.

Table 2. Ice out date on Lake of the Woods from 2012 to 2024.

2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
April 28	May 13	May 16	April 23	May 2	May 14	May 14	April 24	May 4	May 3	May 21	May 15	April 8

\*Median ice-out date for Lake of the Woods is May 3<sup>rd</sup> (MN DNR Website)

Lake Bronson in Kittson County recorded an ice out date of April 13<sup>th</sup> 2024. The median ice out date is April 15.

## **CROP MANAGEMENT**

The frost being out of the ground in most fields coupled with above average temperatures last week resulted in a steady increase in soil temperatures. Soil temperatures in turf conditions at the NDAWN site at the U of MN Magnusson Research Farm was 40F on Monday and 49F on Sunday. Kentucky bluegrass and perennial ryegrass plants had a noticeable increase in growth from Monday of last week to the weekend. Next week will be a good time to evaluate perennial ryegrass stand assessments. fields for winterkill. Perennial ryegrass plants that did not experience crown injury are growing well and are in the tillering stage of growth. Perennial ryegrass plants that experienced crown injury range from dead plants to plants that are beginning to grow from the crown region. A determination will have to be made on what percentage of the perennial ryegrass field is tillering compared to areas that have dead plants or plants just beginning to grow. The challenge with fields that have a range of growth (full tillering to one or two leaf) is that come swathing time the plants that are now in the tillering stage will mature well before the plants that have a couple leaves. If the perennial ryegrass field has large areas of gaps or plants that are a few weeks behind the most developed plants in a field, best management practices would suggest a termination of the perennial ryegrass field. If the field has a high percentage of perennial ryegrass plants that are tillering with a lower percentage of gaps and ryegrass plants that have a couple leaves these are fields that would be candidates for ryegrass seed production in 2024.

A review of the perennial ryegrass time of nitrogen utilization will give guidance on application timing in perennial ryegrass fields. The perennial ryegrass plant goes through three distinct phases in the uptake and utilization of nitrogen.

- Phase one - Slow nitrogen uptake, up to **700 GDD**
- Phase two - Rapid nitrogen uptake, **700 to 1,300 GDD**
- Phase three - Nitrogen redistribution, **1,300 GDD to physiological maturity**

Thus far in 2024, the total GDD accumulation is 371. The current 10-day forecast suggests an additional 243 by May 15<sup>th</sup>. If this forecast holds, the total accumulated GDD by May 15<sup>th</sup> will be 614. Previous U of MN fertility research indicates that spring applied nitrogen should be in the rooting zone prior to 500 GDD's with no previous nitrogen and up to 700 GDD if 30 to 50 units of nitrogen was applied in the fall. Perennial ryegrass fields that are to be harvested in 2024 should have spring nitrogen applied by mid-May.

## **PEST MANAGEMENT**

What can be done to control volunteer wheat in perennial ryegrass seed fields? Depending upon the year, volunteer wheat in perennial ryegrass fields will range from an isolated problem to a heavy infestation across the entire field. Time will tell what the 2024 season has in store for volunteer wheat in perennial ryegrass fields. If field scouting indicates a control measure is warranted, Callisto applied early postemergence has good activity on volunteer wheat. U of MN research has indicated good tolerance of perennial ryegrass to Callisto at 3 to 4 oz/acre applied postemergence. A double additive crop oil or MSO with 28% nitrogen will improve volunteer wheat control compared to a single additive.

Next week's newsletter will be released on May 14<sup>th</sup> .