

**MINNESOTA TURF SEED COUNCIL  
NEWSLETTER  
July 20, 2021**

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

Perennial ryegrass GDD's will be tracked in the 2021 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 will be used for perennial ryegrass (T-Base = 32 F).

- Year to date GDD = 2,762 (Table 1)
- Last week (July 12-18) accumulated GDD = 268
- Average GDD for third week of July = 239
- Projected GDD for the next 10 days = 420, or 42/day (Table 1)
- Average GDD for the end of July = 234, or 33.4/day
- The new 10 day forecast suggest continuation of the above average temperatures for the end of July as the projected GDD accumulation is 42/day compared to the long term average of 34.4/day.

Table 1. Growing Degree Days (GDD), March - July 2015 to March - July 2021 near Roseau MN.

<b>Year</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2021 vs. 2020</b>
March	131	30	0	0	90	38	119	+101
April	236	183	211	184	458	263	367	+53
May	640	600	548	815	679	765	659	+40
June	1,077	995	919	1,007	917	945	941	+82
July 1-18	678							
July		1,179	1,067	1,100	1,095	1,123	1,147	
Total	2,762	2,987	2,745	3,106	3,239	3,134	3,233	
*July 19-28	420							

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

**GENERAL CROP CONDITION**

The new 10 day forecast suggests a continuation of the warmer than average temperatures. Late summer seeded perennial ryegrass fields are losing green color and many areas of fields are turning brown. Many spring seeded ryegrass fields were swathed last week and will continue this week. The decision on when to swath ryegrass will be complicated this year by the accelerated ryegrass maturity due to lack of soil water in areas of the field.

**CROP MANAGEMENT**

Spring wheat is beginning to turn color which is a reminder that harvest will not be that far off. Late summer seeding of perennial ryegrass can be an effective method of stand establishment. In the environmental conditions of northern Minnesota, seeding perennial ryegrass into fallow ground, or into wheat stubble after wheat harvest are both proven methods of perennial ryegrass stand establishment. Seeding date trials conducted at the U of MN Magnusson Research Farm indicate that seeding ryegrass in late August gave the highest yields and dry matter accumulation the next growing season (Table 2). Further, a significant decline in ryegrass yields and accumulated dry matter was detected as seeding date was delayed to mid-September into October.

Table 2. Perennial ryegrass ‘Arctic Green’ date of seeding trial conducted at the U of MN Magnusson Research Farm in 2007.

Seeding Date*	Seed Yield**	Dry Matter **
	(#/acre)	(tons/acre)
8/23	1,557	3.00
8/30	1,695	3.36
9/6	1,276	2.43
9/13	1,128	2.14
9/20	892	1.58
9/27	508	0.89
10/4	116	0.37
LSD (0.05)	319	0.63

\* Plots were watered after each seeding date

\*\* Perennial ryegrass seed yields (#/ac) and dry matter yields (tons/ac) were averaged over the fallow seeding with a wheat cover crop and, plots seeded directly into wheat stubble

If seeding perennial ryegrass, in late summer, the following are management practices to consider:

- A preharvest application of Roundup will control weeds and help dry down the wheat which may allow an earlier seeding of ryegrass into wheat stubble
- If an application of Roundup wasn’t applied preharvest, consider an application after wheat harvest and prior to ryegrass seeding for general weed control
- Spend the time setting the combine to get a uniform spread of wheat straw, or bale the straw and remove bales as soon as possible
- Apply the P& K for next year’s ryegrass crop after wheat harvest
- Consider a harrow operation to spread wheat straw and fines prior to seeding ryegrass

The management of a perennial ryegrass crop to be harvested in 2022 begins with wheat harvest. The distribution of wheat straw from the back of the combine is a critical step in ryegrass management. A little extra time to get a uniform spread of straw will pay dividends in ryegrass stand uniformity and seed yields in 2022.

### **PEST MANAGEMENT**

Low levels of leaf and stem rust can be observed in perennial ryegrass field at the U of MN Magnusson Research Farm that didn’t receive a fungicide treatment. No rust was observed in perennial ryegrass areas that received a fungicide treatment full head extension.

Next week’s newsletter will be released on July 27<sup>th</sup>.