

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 28, 2020**

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's will be tracked for the 2020 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 = 2,809 (Table 1)
- Last week (July 20-26) accumulated GDD = 255 (36.4/day)
- Average GDD for the end of July = 234 (33.4/day)
- Average GDD for the first week of August = 229 (32.7/day)
- Projected GDD for the first week of August 2020 = 266 (38/day)
- Average temperatures for the first week of August = High 77F and low 51F
- Projected temperatures for the first week of August 2020 = High 80.6 and low 58F
- The new ten day forecast suggests a continuation of above average temperatures. The projected GDD accumulation of 36.4/day compared to the average of 33.1/day

Table 1. Growing Degree Days (GDD), March - July 2014 to March - July 2020 near Roseau MN.

Year	2020	2019	2018	2017	2016	2015	2014	2019 vs. 2020
March	30	0	0	90	38	119	0	+30
April	183	211	184	458	263	367	159	-28
May	600	548	815	679	765	659	654	+52
June	995	919	1,007	917	945	941	964	+76
July 1-26	1,001							
July		1,067	1,100	1,095	1,123	1,147	1,066	
Total	2,809	2,745	3,106	3,239	3,134	3,233	2,843	
*July 27- Aug 5	364							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The new ten day forecast suggests a continuation of the above average temperatures with projected GDD of 3.3/day above the long term average. Several ryegrass fields have been harvested with more fields will be swathed and harvested this week. Remember it's important to closely monitor ryegrass fields as seed moisture levels can drop 1 to 3% points/day as seed moisture levels fall from the mid 40's to mid-30%. See the July 14th newsletter for a discussion on ryegrass seed moisture and swathing.

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.

The management of a perennial ryegrass crop to be harvested in 2021 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 2020.

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 and dry matter yields were averaged over fallow seeding with a wheat cover crop and seeded directly into wheat stubble

If seeding 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

PEST MANAGEMENT

Late season rust had been observed in the area. Unless the ryegrass field is a couple weeks, or more from swathing, rust at this time will not cause a significant yield loss. If the ryegrass field is still green a fungicide application may be management practice to consider.

Next week's newsletter will be released on August 4th