

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 23, 2019**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2019 growing season with comparisons to the previous six years. A base temperature of 32 degrees F will be used for ryegrass (T-Base = 32 F). Reported GDD are based on the total accumulation from the beginning of the calendar year, after snow has melted from ryegrass fields, to the current calendar date.

- Year to date GDD = 2,428 (Table1)
- Average GDD accumulation for third week of July = 239 (34.1/day)
- Actual GDD accumulation for third week of July in 2019 = 256 (36.6/day)
- Accumulated GDD in the third week of July 2019 was +2.5/day above the long-term average
- Average temperature for the end of July; high temperature of 78 F and low of 53 F
- Average GDD accumulation for end week of July = 234 (33.4/day)
- Projected GDD for end of July = 384 (38.4/day)
- Forecast for the end of July 2019, +5 GDD/day higher than the long-term average

Table 1. Growing degree days (GDD), March - July 2013 to March - July 2019 near Roseau MN.

Year	2019	2018	2017	2016	2015	2014	2013	2019 vs. 18
March	0	0	90	38	119	0	0	0
April	211	184	458	263	367	159	80	+27
May	548	815	679	765	659	654	640	-267
June	919	1,007	917	945	941	964	975	-88
July 1-21	750							
July		1,100	1,095	1,123	1,147	1,066	1,088	
Total	2,428	3,106	3,239	3,134	3,233	2,843	2,783	
*July 22-31	384							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Several ryegrass fields are beginning to show a brown cast in the upper portion of the plant canopy which is a sign that seed filling is near completion and the plant is close to maturity. With the recent rains coupled with above average temperatures, plant dry down will proceed at an above normal pace. If the weather forecast holds, look for these early maturing ryegrass fields to be swathed this week and will continue for the next couple weeks.

CROP MANAGEMENT

Winter wheat is beginning to mature with spring wheat not far behind. The management of a perennial ryegrass crop to be harvested in 2020 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.

CROP MANAGEMENT

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** (#/acre)	Dry Matter ** (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 a couple 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

Next week's newsletter will be released on August 6th, 2019.