

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
April 17, 2019**

INTRODUCTION

Welcome to the first edition of the Northern Minnesota Turf Seed Growers Newsletter for 2019. The primary objective of this newsletter is to report on weather conditions, crop growth & development, pest management and to chart year-to-date perennial ryegrass growing degree days (GDD) compared to the previous six years. The newsletter is scheduled for weekly distribution from the beginning of ryegrass green-up through swathing.

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RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2019 growing season with comparisons to the previous six years. In northern MN, the accumulation of GDD is triggered after the snow has melted from perennial ryegrass fields. The base temperature for ryegrass is 32 degrees F (T Base = 32 F)

Formula to calculate GDD:

$$\frac{(\text{Daily High Temp} + \text{Daily Low Temp}) - \text{T base}}{2}$$

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 date. Thus far in 2019, we have accumulated 31 GDD as of April 16th (Table1).

Table 1. Growing degree days (GDD), March & April 2013 to March & April 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		184	458	263	367	159	80	
April 1-16	31							
Total		184	548	301	486	159	80	
*April 17-26	168							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Based on the amount of snow cover during the winter and the relatively slow snow melt in late March into April should be good news for winter survival of perennial ryegrass. This will be a welcome change from the last couple years! A uniform ryegrass stand, after snow melt and the freeze thaw conditions of early spring, generally ‘sets the table’ for a better than average ryegrass crop. Any management practice that will promote uniformity of the perennial ryegrass stand will be a positive for ryegrass seed yields at harvest. Early indications suggest the 2019 perennial ryegrass survived the winter as crowns appear healthy with a tinge of green leaf tissue visible, and when dug, the roots are white in color. Weather conditions in the next couple weeks will allow for a better stand assessment.

CROP MANAGEMENT

The data in Table 2 lists the average onset perennial ryegrass growth stages based on the accumulation of GDD. The data presented is averaged over years, locations and planting dates from perennial ryegrass fields in the Roseau area. These ryegrass plant stages will be referenced in future newsletters. The GDD information will serve to benchmark perennial ryegrass growth stages which can be used in scheduling various field activities throughout growing season.

Table 2. Perennial Ryegrass Growth Stage by Accumulated GDD, Averaged Over Years, Locations and Planting Dates Near Roseau, MN.

<u>Plant Stage</u>	<u>GDD</u>
Greenup	100
Tillering	300
Early Jointing	700
Late Jointing	900
Early Heading	1,100
50% Headed	1,300
Pollen Shed	1,600
Swathing	2,700

Next week's newsletter will be released on April 23nd, 2019.