

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 16, 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 = 1,228 (Table 1)
- Last week (June 8-14) accumulated GDD = 197 (28.1/day)
- Average GDD for the second week of June = 186 (26.6/day)
- Average GDD for the third week of June = 197 (28.1/day)
- Projected GDD for the third week of June 2020 = 256 (36.6/day)
- Average temperatures for third week of June = High 74.1F and low 47.8F
- Projected temperatures for third week of June 2020 = High 74.3F and low 59.3F
- The new ten day forecast suggests a return to above average temperatures. The projected GDD accumulation of 34.4/day compared to the average of 29.2/day

Table 1. Growing Degree Days (GDD), March - June 2014 to March - June 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 1-14	415							
June		919	1,007	917	945	941	964	
Total	1,228	1,678	2,006	2,244	2,001	2,086	1,777	
*June 8-17	296							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Last week the accumulated GDD was 197 (28.1/day) which is 1.5 GDD/day warmer than the long term average for the second week of June. The new ten day forecast suggests this warming trend will continue as the temperatures in mid-June are projected to be above average by 5.2 GDD/day. Further, the average low temperature is projected to be 59.3F compared to the average of 47.8F. This is a difference of 11.5F/day which will promote rapid perennial ryegrass growth and development. Many spring seeded ryegrass fields are 50% headed, or more, while fall seeded and fields were burned this spring are in the late jointing to early heading stage.

CROP MANAGEMENT

The rains early last week and the subsequent wet field conditions have resulted in a delay in the application of growth regulators in spring seeded ryegrass. Questions are being asked if it's too late to get an economic return from an application of a growth regulator in perennial ryegrass. As of 6/12/20, spring seeded perennial ryegrass at the U of MN Magnusson Research Farm was approximately 50% headed and averaged 15 inches tall. Based on historical research perennial ryegrass height, at harvest, is in the mid-to high 20 inches tall in the absence of a growth regulator with good growing conditions. If environmental conditions are hot and dry perennial ryegrass height will in in the low to mid-20 inches tall in the absence of a growth regulator. With the rainfall received last week the expectation would be that ryegrass not treated with a growth regulator will be in the mid-to-high 20 inches tall at harvest. If this assumption is correct, perennial ryegrass has at least 10 inches of vertical growth before maturity. Based on these assumptions it still would be a good management decision to apply a growth regulator in spring seeded perennial ryegrass. Fall seeded perennial ryegrass should be in the early heading stage this week and would be a good time to apply a growth regulator.

PEST MANAGEMENT

Several questions have been asked about late season broadleaf weed control in perennial ryegrass. What is the injury potential from broadleaf herbicides applied to headed perennial ryegrass. Research conducted at the U of MN Magnusson Research Farm indicates that headed perennial is tolerant to many broadleaf herbicides. The data set in Table 2 is from research conducted in 2012. Herbicides were applied to 'Arctic Green' that was 60% headed with minimal weed pressure.

Table 2. Late season broadleaf weed control applied to 'Arctic Green' perennial ryegrass at the U of MN Magnusson Research Farm in 2012

<u>Treatment</u>	<u>Rate/acre</u>	<u>Seed Yield (#/acre)</u>	<u>Seed Yield (% of untreated)</u>
MCPE	1 pint	1433	107.8
2,4-D amine	1 pint	1439	108.3
Aim	1 oz + 0.25% NIS	1350	101.6
2,4-D+Clarity	1+1pint	1320	99.3
Basagran	1.5 pint +1%MSO	1302	98.0
2,4-D ester	0.75 pint	1299	97.7
Stinger	6 oz	1296	97.5
Clarity	1 pint	1252	94.2
<u>Untreated</u>		<u>1329</u>	<u>100</u>
LSD (0.05)		137	10.3

Next week's newsletter will be released on June 23rd