

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 9, 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 = 1,914 (Table1)
- Average GDD accumulation for first week of July = 230 (32.9/day)
- Actual GDD accumulation for first week of July in 2019 = 236 (33.6/day)
- Accumulated GDD in the first week of July 2019 was +0.7/day above the long-term average
- Average temperature for the second week of July; high temperature of 78 F and low of 54 F
- Average GDD accumulation for second week of July = 243 (34.7/day)
- Projected GDD for second week of July = 270 (38.6/day)
- Forecast for the second week of July 2019, +3.9 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 1-7	236							
July		1,100	1,095	1,123	1,147	1,066	1,088	
Total	1,914	3,106	3,239	3,134	3,233	2,843	2,783	
*July 8-17	391							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Ryegrass fields continue to shed pollen. After pollen shed the next stages of growth are seed filling, physiological maturity, seed dry down and maturation. A review of ryegrass seed maturation and swathing information will be a topic in next week's newsletter.

CROP MANAGEMENT

With the recent rains and warm weather weed, escapes are beginning to show up in some area ryegrass fields. As of this date, the primarily weed escapes are grassy weeds. Depending upon the size of these weed patches it may be a consideration to mow these weeds prior to swathing. In addition, as we get closer to harvest, it may be helpful to draw a weed map that would detail the type of weed and approximate size of the weed patch. Another option would be to detail these areas from the swather. This information will be helpful in the development of a weed control plan for future crops.

PEST MANAGEMENT

Rust diseases

In northern Minnesota environments, crown rust has been observed after approximately 1,500 GDD and leaf and stem rust at approximately, 1,900 GDD. Year to date, we have accumulated 1,914 GDD (Table 1). The new 10-day forecast suggests above average temperatures with chances of thundershowers. Summertime thundershowers generally move quickly and often times are associated with strong southerly winds. Rust spores can be carried long distances on these southerly winds which move into the area from southern states. If ryegrass fields have full head extension, now would be a good to apply a fungicide to protect the ryegrass seedhead from potential leaf and stem rust infections. As a review, the following are several strategies for rust control in ryegrass post heading:

- 1) Scout ryegrass fields for rust every two- to- three days. In favorable environmental conditions rust can increase rapidly and this fungal pathogen can “explode” in just a few days.
- 2) If a fungicide has been applied with a previous trip across the field, apply a fungicide when the last applied fungicide is about to “run out”. The number of days of disease protection will depend upon the fungicide used and product rate.
- 3) Spray a fungicide after the accumulation of 1,900 GDD. Historically, leaf and stem rust occurs at approximately 1,900 GDD. A full rate of a fungicide will provide rust protection for 21 to 28 days. A fungicide applied at 1,900 GDD should provide disease protection until ryegrass swathing (approximately 2,800 GDD).

Insects

Grasshoppers have been detected in the area for several weeks with several reports of ryegrass fields treated with an insecticide to reduce leaf and stem feeding. Continue to monitor fields for grasshoppers, especially on field edges as grasshoppers feeding on ryegrass heads can clip ryegrass seed heads which can be the cause of significant seed yield losses.

Armyworms are another insect pest that can cause losses in ryegrass. With the recent rains and lodged areas of ryegrass fields, these areas are an ideal spot for moths to lay eggs. Adult armyworm moths have been captures in insect traps and adult moths observed in the last few days.

Next week’s newsletter will be released on July 16th, 2019.