

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 17, 2016**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2016 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 year to the current calendar date. Thus far in 2016, we have accumulated 596 GDD, as of May 8th (Table 1). Last week averaged 109 (15.6/day) GDD compared to the long term average of 132 (18.9/day) for the second full week of May. The short term forecast suggests a return to warm temperatures and projected GDD for the week are 209 (29.9/day) compared the average of 148 (21.1/day) for the third week of May.

Table 1. Growing degree days (GDD), March - May 2010 to March -May 2016 near Roseau MN.

Year	2016	2015	2014	2013	2012	2011	2010	2016 vs. 15
March	38	119	0	0	304	7	137	-81
April	263	367	159	80	370	278	476	-104
May		659	654	640	726	639	707	
May 1-15	295							
Total	596	1,145	813	720	1,400	924	1,320	
May 16-25*	298							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Last week was a busy week for application of fertilizer in ryegrass and will continue this week. With the projected warm temperatures and good soil moisture perennial ryegrass will enter a period of very rapid growth. Perennial ryegrass, for the most part, is in the tillering stage of growth. The next critical stage of growth in perennial ryegrass is jointing.

As a review, the following are the average GDD for the various stages of perennial ryegrass in northern MN. The GDD numbers below are averaged over various management systems (spring and fall seed,) at Roseau, MN.

<u>Growth Stage</u>	<u>GDD</u>
Greenup	100
Tillering	200
Early Jointing	700
Late Jointing	900
Mid-heading	1,300
Pollen Shed	1,600
Swathing	2,700

PEST MANAGEMENT

Wild oats have emerged as have common lambsquarters, wild buckwheat and wild mustard. Winter annuals are bolting! If broadleaf herbicides were not applied last fall, now would be the time to scout ryegrass fields to determine the infestation level of winter annuals, perennial broadleaf weeds (dock, dandelion, clovers) and cool season broadleaf weeds (wild mustard, wild buckwheat, common lambsquarters, smartweeds).

CROP MANAGEMENT

One of the questions asked is how long can we wait to make an application of nitrogen fertilizer in ryegrass without a yield penalty? Previous U of MN research indicates if a base rate of 30 to 60 pounds of nitrogen is in the ryegrass root zone from:

- nitrogen carryover of the previous year's crop
- soil mineralization
- nitrogen application last fall with the P & K

Nitrogen fertilizer in ryegrass can be applied up to the mid- jointing stage without a sacrifice in seed yield. Based on prior years GDD information, ryegrass plants will begin to joint at approximately 700 GDD. Year to date, accumulated GDD is 596. If we average 21 GDD/day which is the long term average for the third week of May, we have approximately 10 days to apply nitrogen in ryegrass. Short term forecast suggest a good chance of rain the early part of next week (May 23). Rainfall would be required to move this nitrogen into the root zone.

If ryegrass plants are not showing signs of nitrogen stress (stunting & yellowing) a soil test or tissue test will document current nitrogen levels in the soil and plant tissue. However, if ryegrass plants are showing stress from nitrogen (not water logging), a supplemental application of nitrogen should be a consideration. Previous U of MN research suggests ryegrass, up to heading, will tolerant 28% up to 20# of actual N (six gallons). These applications were applied with a small plot sprayer with flat fan nozzles delivering 12 GPA. Streamer bars would be an option for higher volumes of 28%.

SUMMER GRASS SEED FIELD TOUR

The annual grass seed field tour has been scheduled for 5:00 pm on Wednesday, June 29th at the U of MN Magnusson Research Farm. Directions to the Magnusson Research Farm; from the intersection of Hwy 11 and 89 travel approximately 2 miles north on Hwy 310, turn left (west) off Hwy 310 onto Roseau County 16 and for approximately 3 miles. The farm is located on the north side of Hwy 16. Grass seed varieties include: bluegrass, fescue, intermediate wheatgrass, perennial ryegrass and switchgrass. Management projects include: cover crop research, biomass and vegetation composition research, weed control research in ryegrass, fertility rate and timing in ryegrass, ryegrass date of planting, ryegrass growth regulators and fungicides and other research will be included on this tour.

Next week's newsletter will be released on May 24th, 2016.