MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 16, 2018

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2018 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 to the current date.

- Year to date, GDD = 438 (Table1).
- Average temperatures for the third week of May, high of 67.3 F and low 39.4 F
- Average GDD accumulation for third week of May = 151 (21.6/day)
- Current 10 day forecast projects daily highs in the low-mid 70's and lows in the mid-40's
- Projected 10 day GDD = 275 (27.5/day)
- Current 10 day forecast projects warmer than average temperatures (+6.1 GDD/day)

Table 1. Growing degree days (GDD), March & April 2011 to March & April 2017 near Roseau MN.

Year	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2018 vs. 17**
March	0	90	38	119	0	0	304	-90
April	184	258	263	367	159	80	370	-74
May		679	765	659	654	640	726	
May 1-13	254							
Total	438	1,027	1,066	1,145	813	720	1,400	
*May 14-23	275							

* Forecasted GDD at Roseau for the next 10 days.

LAKE of the WOODS - ICE-OUT DATE

The date when lakes are free of ice (ice-out date) is an indication of the "earliness" or "lateness" of spring. The 2018 ice out date on Lake of the Woods was recorded on May 14th (Table 2). This is 11 days later than the long term average ice out date of May 3rd. The earliest ice-out date is April 8th which was recorded in 2000 and again in 2012. Latest ice-out date is May 21st which was recorded in 2014.

Table 2. Ice out date on Lake of the Woods from 2007 to 2018.

2018	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**
May 14	April 19	May 4	May 3	May 21	May 15	April 08	May 05	April 13	May 08	May 12	May 03

* Median ice-out date for Lake of the Woods is May 3rd (MN DNR Website).

GENERAL CROP CONDITION

If nitrogen is in the root zone, perennial ryegrass fields are showing vigorous growth with a deep green color. If nitrogen has yet to be applied, or nitrogen is not in the root zone, ryegrass plants are less vigorous and exhibit a pale green color. A couple days of rain are in the forecast for later in the week which will help move fertilizer into the ryegrass root zone.

PEST MANAGEMENT

As the soil temperature warms from the 40's into the 50 degrees F, look for accelerated annual weed emergence, especially the cool season broadleaves and grasses (common lambsquarters, smartweed spp., wild mustard, wild buckwheat and wild oat). Now is the time to schedule fields to be scouted for broadleaf weeds. Winter annuals (dandelion, shepardspurse, and cockle) are bolting. Dandelions were in full blooming over the weekend! Annual weeds (volunteer canola, mustard, wild buckwheat and smartweed) are first to emerge in the spring. A tank mix of dicamba and 2, 4-D (0.5-1pt of each) is an effective broad-spectrum broadleaf control option for weed control in ryegrass. If the broadleaf weed control program in includes a fall and spring application timing, the spring application timing can be extended compared to a spring only program. A spring only program for broadleaf weed control will have to be made soon in order to control winter annual weeds with a subsequent broadleaf application for other weeds later in the year.

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 either:

- 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 be in the early jointing after the accumulation of 800 GDD. Year to date, accumulated GDD is 438. The average GDD accumulation for the third week of May is 21 GDD/day, so we have approximately 17 days to apply nitrogen in ryegrass. However, with the current warming trend with the projected GDD accumulation of 27.5/day, ryegrass would be in the early jointing stage in 13 days. As with any post emergence fertilizer application 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. If ryegrass plants are showing stress from nitrogen (not water logging, or nitrogen that has not moved into the root zone), 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%. Foliar feeding in ryegrass will be discussed in future newsletters. This information is summarized and available on the web. See web address below.

U of MN Research Reports

Grass Seed research results are available on the web. Research reports from 1967 to 2017 can be found on the web: http://www.mnturfseed.org/html/progress_reports.html

Next week's newsletter will be released on May 23rd, 2018.