

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
April 25, 2017**

INTRODUCTION

Welcome to the second edition of the Northern Minnesota Turf Seed Growers Newsletter for 2017. 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. Special alerts will be sent as pest infestations dictate or production problems arise during the growing season.

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RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2017 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. Thus far in 2017, we have accumulated 346 GDD as of April 23rd (Table1). After a couple weeks of above normal temperatures, the current short term weather forecast is pointing to below average temperatures for the entire week. The current 7 day forecast suggests an accumulation of only 2.7 GDD/day compared to the long term average of 19 GDD/day for the last week in April.

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

Year	2017	2016	2015	2014	2013	2012	2011	2017 vs. 16
March	90	38	119	0	0	304	7	+52
April		263	367	159	80	370	278	
April 1-23	256							
Total	346	301	486	159	80	674	285	
April 24 to 30*	19							

* Forecasted GDD at Roseau for the next 7 days.

The weather forecast for the first week of May suggests a return to more normal temperatures. The long term average daily high temperature is 60 and low of 33 for the first week of May. Current weather forecast for the first week of May suggests a return normal daily high temperatures with above normal low temperatures.

GENERAL CROP CONDITION

Perennial ryegrass plants, for the most part, have broken winter dormancy. Perennial ryegrass breaks winter dormancy in more of a gradual than rapid process (e.g. flipping a switch). Several factors influence the time and speed that perennial breaks dormancy including:

- Perennial ryegrass variety
- Time of seeding (spring vs. fall)
- Size of the crown going into winter
- Amount of residue on the soil surface
- Amount and duration of snow cover
- Soil temperature
- Soil moisture content
- Surface water that ponds and/or freezes
- Spring temperatures

Weather conditions in 2017 has resulted in a significant amount of perennial ryegrass leaf and tissue necrosis. This dead ryegrass leaf tissue makes it difficult to get an indication of winter survivability and ryegrass stand assessment. A couple weeks of normal temperatures, highs in the mid 50's and lows in the mid 30's will allow a better indication of ryegrass winter survivability and stand assessment.

PEST MANAGEMENT

The current weather forecast for last week in April suggests below normal temperatures. However, the forecast for the first week of May points to a return to more normal high daily temperatures and above normal daily low temperatures. With the recent moisture and accelerated accumulation of GDD's, weed emergence and growth will proceed at a rapid pace. As average daily temperatures increase, herbicide applications for broadleaf weeds will be right around the corner. This will be especially important if a broadleaf herbicide was not applied last fall. Winter annuals (dandelion, shepardspurse, and cockle) are beginning to grow. Annual weeds (volunteer canola, mustard, and smartweed) are first to emerge in the spring. Weeds grow fast and regular scouting is essential to determine the best weed control program for your situation.

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 MN DNR website lists May 3rd as the median ice-out date for Lake of the Woods. The 2017 ice out date on Lake of the Woods was recorded on April 19th. This is about 2 weeks earlier 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 2006 to 2017.

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

Next week's newsletter will be released on May 2nd, 2017.