

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 10, 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 487 GDD, as of May 8th (Table 1). After a week of above average temperatures, the short term forecast suggests average temperatures for the early part of the week with below normal temperatures towards the weekend. The projected GDD for the next ten days at Roseau is 193 (19.3/day).

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 1-8	186							
Total	487	1,145	813	720	1,400	924	1,320	
May 9-18*	193							

* 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. With the early snow melt (mid-March), the 2016 season had all the indications of an early spring. The last early spring was in 2012, which also had snow melt in mid-March with an ice out date of April 8th (Table 2). However, even with the mid-March snow melt in 2016, recorded ice out date on Lake of the Woods was May 4th.

The MN DNR website lists May 3rd as the median ice-out date for Lake of the Woods. The earliest ice-out date is April 8th which was recorded in 2000 and again in 2012. Latest ice-out date is May 21st in 2014. Ice out date for 2016 was May 4th which would be considered an average year based on Lake of the Woods ice out dates.

Table 2. Ice out date on Lake of the Woods from 2006 to 2016.

2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
May 4	May 3	May 21	May 15	April 08	May 05	April 13	May 08	May 12	May 03	April 20

PEST MANAGEMENT

Winter annuals (dandelion, shepardspurse, and cockle) are growing well and will soon bolt. Annual weeds (volunteer canola, mustard, and smartweed) are first to emerge in the spring. Canada thistle and warm season weeds have yet to emerge. This presents a dilemma for weed control in ryegrass. If we wait too long, the winter annuals will be in full flower and produce seed, but if we spray too soon the thistle and other warm weed species will not be controlled as they have yet to emerge. If a broadleaf herbicide was not applied last fall, it may be advantageous to consider two applications for broadleaf weed control. The first timing will control winter annuals and cool season broadleaf weeds and the second timing for Canada thistle and warm season broadleaf weeds.

Dicamba and 2, 4-D are the workhorses for broadleaf weed control in ryegrass. Perennial ryegrass is very tolerant of these two products. 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 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 (minimum of 0.75pt dicamba & 2, 4-D) order to control winter annual weeds that will soon be bolting and flowering! Weeds grow fast and regular scouting is essential to determine the best weed control program in your ryegrass fields.

CROP MANAGEMENT

What is the nutrient content of various parts of the perennial ryegrass plant? Researchers in the perennial ryegrass growing areas of the Pacific Northwest have studied this topic and results are presented in Table 3. In northern MN environments, perennial ryegrass will produce between 1 and 3 tons of straw (dry matter). If the straw is baled and removed, consideration should be given to an application of plant food to replace nutrients removed in the straw. As an example, if 1,000 pounds of ryegrass seed and 2 tons of ryegrass straw was baled and removed from a field, an additional 60 (40 straw + 20 seed) pounds of N, 18 pounds of P₂O₅ (10 straw + 8 seed), 106 (100 straw + 6 seed) pounds of K₂O and 10 (10 straw + < 1 seed) pounds of sulfur would need to be added to the field to replace nutrients removed in the straw. Below ground, the perennial ryegrass plants have approximately 4 tons of root dry matter. However, these nutrients will be available, in time, to rotational crops.

Table 3. Nutrient content of perennial ryegrass, straw (#/ton), ryegrass seed (#/1,000# seed) and ryegrass roots (#/ton). Source: Oregon State University

Ryegrass Plant	Nitrogen	P₂O₅	K₂O	Sulfur
Straw (#/ton)	20	5	50	5
Seed (#/1,000#)	20	8	6	<1
Roots (#/ton)	16	7	5	1.5

Next week's newsletter will be released on May 17th, 2016.