

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
April 19, 2016**

INTRODUCTION

Welcome to the first edition of the Minnesota Turf Seed Growers Newsletter for 2016. The primary objective of this newsletter is to report on weather conditions, crop growth and development, and 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.

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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)

GDD are charted from the beginning of the year, not when the ryegrass plant breaks dormancy. It's difficult to pin-point the exact date when the ryegrass plant breaks dormancy. However, ryegrass root growth and development begins prior above ground portions of the plant. Healthy roots are white in color and typically is the first sign of a ryegrass plant breaking dormancy. Several factors determine when ryegrass breaks winter dormancy (see discussion below), but over the last six years, perennial ryegrass begins to breaks dormancy after the accumulation of approximately, 100 GDD.

Reported GDD are based on total accumulation from the beginning of the calendar year to the current date. Thus far in 2016, we have accumulated 124 GDD as of April 17th (Table1). Short term forecast indicates an improvement in temperatures. The projected GDD for next ten days at Roseau is 150 (15/day). If the current forecast holds, we will more than double the accumulated GDD's in the next ten days, compared to the entire year to date!

Table 1. Growing degree days (GDD), March & April 2010 to March & April 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		367	159	80	370	278	476	
April 1-17	86							
Total		486	159	80	674	285	613	
April 18-27*	150							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Perennial ryegrass plants are beginning to break winter dormancy. As of April 15th, the frost depths near the U of MN Magnusson Research Farm ranged from 10-16 inches in bluegrass sod with the average soil temperatures of 40 F in sod and 45 F in tilled ground. The rain over the weekend coupled with the projected elevated temperatures this week will help bring the frost out of the ground.

Perennial ryegrass breaks winter dormancy is more of a gradual, than rapid process (e.g. flipping a switch). Perennial ryegrass variety, time of seeding (spring vs. fall), size of the crown going into winter, residue on the soil surface, temperatures and soil moisture are all factors that influence the speed in which ryegrass breaks dormancy.

PEST MANAGEMENT

With an acceleration of accumulated 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. Winter annuals (dandelion, shepardspurse, and cockle) will be the first weed species to 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.

CROP MANAGEMENT

As the temperatures warm up and the frost comes out of the ground, ryegrass fertility applications will be here before we know it. Now would be a good time to talk to your grass seed fieldman and agronomists to determine a timeline for plant food applications in ryegrass. Research has indicated nitrogen must be in the ryegrass root zone prior to the rapid uptake phase (late tillering to heading). If all nitrogen is to be applied in the spring, fertilizer application should be earlier, (250-500 GDD) than if the nitrogen is applied in a split (fall & spring) application program, up to 800 GDD. If a portion of the nitrogen is a coated product, fertilizer applications could be made earlier than stated in the guidelines above. Additional fertility guidelines will be discussed in future newsletters.

Next week's newsletter will be released on April 27th, 2016.