

MINNESOTA TURF SEED COUNCIL
NEWSLETTER
April 14, 2015

INTRODUCTION

Welcome to the first edition of the Northern Minnesota Grass Seed Growers Newsletter for 2015. 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 five 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 2015 growing season with comparisons to the previous five 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 day the ryegrass breaks dormancy. However, ryegrass root growth and development begins prior above ground portions of the plant and roots that are white in color usually is the first sign of a ryegrass plant breaking dormancy. Several factors determine when ryegrass breaks winter dormancy (see discussion below). However, over the last five years perennial ryegrass begins to breaks dormancy after approximately, 100 GDD.

Reported GDD are based on the total accumulation from the beginning of the calendar year to the current date. Thus far in 2015, we have accumulated 212 GDD as of April 12 (Table1). Short term forecast indicates an improvement in temperatures. The projected GDD for next ten days at Roseau is 177 (17.7/day). If the current forecast holds, we will almost double the accumulated GDD's in the next ten days, compared to the entire year to date!

Table 1. Growing degree days (GDD) for March 2010 to April 2015 near Roseau MN.

Year	2015	2014	2013	2012	2011	2010	2015 vs. 14
March	119	0	0	304	7	137	+119
April		159	80	370	278	476	
April 1-12	93						
Total	212	159	80	674	285	613	
April 13-22*	177						

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Perennial ryegrass plants are beginning to break winter dormancy. Frost depths in fields near the Magnusson Research Farm ranged from 6-10 inches in bluegrass sod to 8-14 inches deep in tilled ground. As of April 12th, average soil temperatures at Roseau was 35F in sod and 42 F in tilled ground. The projected elevated temperatures this week should bring the frost out of the ground and will allow a better assessment of ryegrass winter survivability.

Perennial ryegrass breaks winter dormancy in 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 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. 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.

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 (250-450 GDD) than if the nitrogen is applied in a split application program (fall and spring) 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 21, 2015.