

**NORTHERN MINNESOTA GRASS SEED GROWERS
NEWSLETTER
July 2, 2012**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2012 growing season with comparisons to the last five years. A base temperature of 32 degrees F will be used for ryegrass (T-Base = 32 F).

For the week ending July 1st, accumulated GDD was 263 (37.5/day), and for the year accumulated GDD is 2,221 (Table 1). The new 10 day forecast predicts an average high temperature of 86 degrees and an average low of 61 degrees. If this forecast holds true the next 10 days will be the warmest of the year and we will accumulate an average of 42 GDD/day!

Table 1. Growing degree days (GDD) for March - June from 2007 - 2012 near Roseau MN.

Year	2012	2011	2010	2009	2008	2007	2012 vs. 11
March	304	7	137	30	6	90	+297
April	370	278	476	247	202	322	+92
May	726	639	707	515	501	746	+87
June	979	898	911	860	870	990	+81
July		1162	1174	943	1034	1156	
July 1	42						
Total	2,421	2,984	3,405	2,595	2,613	3,304	

GENERAL CROP CONDITION

Ryegrass

Ryegrass fields continue to shed pollen and ryegrass plants are in the seed filling stage.

Bluegrass

'Park' bluegrass harvest has begun and with the warm weather harvest will progress at a rapid pace.

PEST MANAGEMENT

Ryegrass

Leaf and stem and crown rust have been observed at the Magnusson Research Farm. One of the first places to look for rust in ryegrass is lodged areas of the fields. In addition, other "hot" spots for rust development are areas of the field adjacent to tree lines, wood lots etc., which air movement is reduced and the plants remain wet for an extended period of time. Leaf and stem rust develops rapidly when rain or dew is present on the plant tissue and the temperatures are above 50 F. A rust infestation can explode in just a few days. Data from the west coast indicates that rust will complete a cycle in 13 to 17 days in 50F and 8 to 9 days if the temps are 65F. Field scouting will determine the presence of rust and the level of infestation. At this point in the growing season, a full rate of a fungicide should protect the ryegrass plant until swathing.

Ryegrass

The USDA-ARS tracks rust development and movement from the Gulf of Mexico to the northern plain states. As of the end of June, low levels of leaf rust were found in areas in the southern Red River Valley. Leaf rust infestations generally were at low levels of incidence. However, one field had 30% severity in Norman County in northwestern Minnesota. Rust spores are blown into the area on southerly winds and rust spores deposited on plant tissue. In the last few weeks, rust has been moving steadily northward. Field scouting will be critical in the next few weeks to document the incidence and severity of rust in area crops. For additional information see the link below for The Cereal Rust Bulletin. The link to this site:

<http://www.ars.usda.gov/mwa/cdl>

CROP MANAGEMENT

Ryegrass

Leaf and stem and crown rust was identified today (Monday) in ryegrass at the Magnusson Research Farm. Fungicides do vary in the ability to control rust when the spores are visible (red for leaf and stem and orange for crown rust). Perennial ryegrass is susceptible to leaf and stem and this disease can cause significant yield losses. The data in Table 2, is from a research trial conducted with heavy leaf and stem rust pressure in Lake of the Woods County in 2010 (Dan Pieper Farm).

Table 2. Leaf and Stem Rust Control in Perennial Ryegrass from various Fungicides (Dan Pieper Farm) in 2010.

Treatment	Rate (oz/A)	Color (1-9 Scale)	Rust Rating (1-9 scale)	Test Weight (#/Bu)	Seed Yield (#/A)
Folicur	4	2.7	3.3	26.2	740
Tilt	4	2.0	3.0	26.0	693
Quilt	12	4.3	3.0	26.9	907
Absolute	6	6.3	2.0	28.6	1094
Untreated		1.0	6.0	19.9	226
LSD (5%)		1.6	1.6		238

Ryegrass was in the heading stage and shedding pollen when applications were made on June 22, 2010. Leaf and stem rust was visible at the time of fungicide application. Treatment differences were observed under heavy rust pressure.

Observations from this trial:

- Heavy leaf and stem pressure at this location
- All fungicide treatments gave better seed yield than the untreated
- All fungicide treatments gave higher test weight than the untreated
- Fungicide treatments with the higher color rating generally gave higher seed yield
- Fungicide treatments with the lower rust rating generally gave higher seed yield

Additional Grass Seed Research Results are available on the web. Research reports from 1967 to the present are available at the web address below.

http://www.mnturfseed.org/html/progress_reports.html

The next Grass Seed Newsletter will be released on July 9, 2012.