MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 18, 2013

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2013 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)

Reported GDD are based on the total accumulation from the beginning of the calendar year to the current calendar date. Thus far in 2013, we have accumulated 1,168 GDD as of June 16th (Table1). Last week, accumulated GDD were 228 (32.6/day). Based on the current 7 day forecast, by the weekend we will have added 253 GDD (36.1/day) Based on this forecast by the fourth weekend in June we will have accumulated approximately 1,421 GDD's for the current calendar year.

Table 1. Growing degree days (GDD) for March 2008 to June 2013 near Roseau MN.

Year	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2013 vs. 12**
March	0	304	7	137	30	6	-304
April	80	370	278	476	247	202	-594
May	640	726	639	707	515	501	-86
June		979	898	911	860	870	
June 1-16	448						
Total	1,168	2,379	1,822	2,231	1,652	1,579	
June 17-23*	253*						
Total	1,421*						

* Forecasted GDD at Roseau for the next 7 days.

GENERAL CROP CONDITION

Ryegrass fields seeded in the spring of 2012 are heading. Now is the time to apply Apogee plant growth regulator in ryegrass. Ryegrass fields seeded in the late summer of 2012 exhibit more variable growth stage compared to spring seeded ryegrass. Late summer established ryegrass stands are delayed in growth and development compared to spring seeded ryegrass. Regular field scouting will be especially important this year to schedule management decisions based on ryegrass stage of growth.

CROP MANAGEMENT

Rust in ryegrass

In previous years, in northern Minnesota environments, crown rust has been observed after approximately 1,500 GDD and leaf and stem rust at 1,900 GDD. Thus far in the 2013 season we have accumulated 1,168 GDD. If we assume 35 GDD/day we have the potential to see crown rust in approximately 10 days and leaf and stem rust in three weeks. If we experience warmer than normal weather with southerly winds this timeline will shorten and if we are cooler than normal with northerly winds will lengthen this timeline.

Of the two rust diseases in ryegrass seed production, leaf and stem rust has the potential for more yield losses in ryegrass seed production than crown rust. Crown rust has an orange cast to the disease compared to the red color of leaf and stem rust.

The USDA-ARS tracks rust development and movement north from the Gulf of Mexico to the northern plain states. As of June 13th, trace levels of wheat leaf rust was detected as far north as SE Iowa. Rust has NOT been observed in Minnesota as of mid-June. Field scouting will continue to monitor and track the progress of rust as it moves northward. For additional information see the link below for The Cereal Rust Bulletin. The link to this site:

(*http://www.ars.usda.gov/mwa/cdl*)

One of the unique features in the life cycle of rust diseases is the requirement of an alternate host to aid in the spread of the disease. The alternate host for leaf and stem rust is barberry (*Berberis vulgaris*) and crown rust is common buckthorn (*Rhamnus cathartica*). These alternate hosts for rust are a necessary step in the life cycle of rust diseases. Rust spores typically are observed on the alternate host prior to infection of susceptible plant species. The following is information from the USDA Cereal Rust Bulletin.

Rust on barberry. In early June, trace levels of early aecial infections have been observed on common barberry in southeastern Minnesota and south central Wisconsin.

Rust on buckthorn. Aeciospores are being released from aecia on common buckthorn the alternate host for oat crown rust, in the Matt Moore Buckthorn Nursery at St. Paul in southeastern Minnesota. Crown rust infections have not yet shown up on oat in the nursery. Due to the cool spring development in the nursery was delayed about two weeks later than average.

SUMMER GRASS SEED FIELD TOUR

The annual grass seed field tour has been scheduled for 5:00 pm on Wednesday, June 26th at the U of MN Magnusson Research Farm. Directions to the Magnusson Research Farm: from the intersection of Hwy 11 and 89 travel approximately 2 miles north on Hwy 310, turn left (west) off Hwy 310 onto Roseau County 16 and for approximately 3 miles. The farm is located on the north side of Roseau County highway #16. Bluegrass, ryegrass, and fescue variety trials will be included on the tour. In addition to grass seed variety trial research, various management trials in perennial ryegrass including; fertility rate and timing in ryegrass, growth regulators, fungicides foliar nitrogen and other research will be included on this tour.

Next week's newsletter will be released on June 25, 2013.