

**NORTHERN MINNESOTA GRASS SEED GROWERS
NEWSLETTER
July 16, 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 15th, accumulated GDD was 284 (40.6/day), and for the year accumulated GDD is 2,986 (Table 1). The new 10 day forecast predicts an average high temperature of 85 degrees and an average low of 64 degrees. If this forecast holds in the next 10 days we will accumulate an average of 43 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 1-15	607						
Total	2,986	2,984	3,405	2,595	2,613	3,304	

GENERAL CROP CONDITION

Ryegrass

Last week ryegrass swathing began in the southern regions of the ryegrass growing areas. Look for swathing to begin in the northern areas this week. As the ryegrass plant dries down, fields can mature quickly. The most recent 10 day forecast predicts daily high temperatures in the mid-80's and lows in the mid-60's. If this forecast holds we will accumulate over 40 GDD/day. Ryegrass fields can turn quickly and regular field scouting will be required to monitor maturity levels and determine when to schedule swathing. When ryegrass is close to the 40% moisture level, seed moisture can drop 2% points or more per day!

As ryegrass seed moisture levels decline, the amount of seed shatter will increase. Ryegrass fields that have turned quickly may have to be swathed in the early morning and evening to reduce seed shatter. This technique of not swathing mid-day was a management practice used to reduce seed shatter in timothy seed production.

Winter wheat harvest is right around the corner and spring wheat harvest is not far behind. If ryegrass is to be seeded into wheat stubble it is important to get a **uniform spread of the wheat straw and chaff**. Chaff spreaders will spread hulls and other "fines". A uniform spread of the wheat straw is the first step in successful ryegrass stand establishment. More on ryegrass stand establishment into wheat stubble in next week's newsletter.

CROP MANAGEMENT

Ryegrass

When to swath ryegrass? That is a question that will be asked soon by growers. It seems our eyes are drawn to the most mature areas of the field. When making a determination on when to cut ryegrass make sure a **representative sample is taken from the entire field not just the areas that are most mature**. One method to get a representative field sample is to take samples from areas that look mature, from areas that are intermediate and from areas of the field that look green. Note the percentage of the field in each of these categories. This will give you a good overall field estimate of maturity. Once these samples are collected seed moisture can be determined using a microwave oven. If possible delay swathing until moisture content of the seed is 35 to 40%. Seed moisture content is determined rubbing the seed from the spike and using the microwave oven to remove the seed moisture.

Caution: In addition to the seed sample, place a small amount of water in a microwave safe container. This will prevent the seed from exploding in the oven. Start with a predetermined seed weight (10 grams) and set the microwave oven for 1 to 1.5 minutes. Continue this procedure until the seed weight is constant. For example, if the initial weight was 10 grams and the final weight was 6 grams the seed moisture is 40%.

RYEGRASS SEED STORAGE MANAGEMENT

With the recent rain and high humidity ryegrass seed may have to be dried for long term storage. Previous experience has indicated that if ryegrass seed moisture is less than 11% going into the bin results in good seed viability and storage. Problems have been reported if seed is put in the bin at over 11% moisture and with natural air (air bin) used to remove moisture from the ryegrass seed.

Air flow resistance and fan pressure are usually expressed in inches of water in a column. This term comes from gages called u-tube manometers that measure this pressure (static pressure). Air flow resistance of a crop and the fan pressure to overcome it depends upon how fast the air is moving and how long and narrow the paths for the air to move. For grains and oil seeds the main factors involved are:

- Seed size (size and shape of seed)
- Depth of crop in the bin (short large diameter bins generally have lower static pressure than tall narrow bins)
- Air flow rate

The expected static pressure charts are available for most grains and oil seeds. However, data is limited for ryegrass and this topic may require local investigation of ryegrass in storage using u-tube manometers to generate this information.

The next Grass Seed Newsletter will be released on July 23, 2012.