

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 25, 2018**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2018 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). Reported GDD are based on the total accumulation from the beginning of the calendar year to the current date.

- Year to date, GDD = 2,813 (Table 1)
- Average temperatures for the fourth week of July, high of 78 F and low 53 F
- Average GDD accumulation for fourth week of July = 234 (33.4/day)
- Current 10 day forecast projects daily highs in the high 70's and lows in the mid 50's
- Projected 10 day GDD = 329 (32.9/day)
- Current 10 day forecast projects cooler than average temperatures (-0.5 GDD/day)
- This is the first week since the end of April with projected temperatures cooler than the long term average.

Table 1. Growing degree days (GDD), March - July 2012 to March - July 2018 near Roseau MN.

Year	2018	2017	2016	2015	2014	2013	2012	2018 vs. 17
March	0	90	38	119	0	0	304	-90
April	184	258	263	367	159	80	370	-74
May	815	679	765	659	654	640	726	+136
June	1,007	917	945	941	964	975	979	+90
July		1,095	1,123	1,147	1,066	1,088	1,230	
July 1-22	807							
Total	2,813	3,066	3,134	3,030	2,843	2,783	3,609	
*July 23 - Aug 1	329							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Ryegrass swathing began last week and will continue as ryegrass fields mature. The short term forecast suggests several days of cool, cloudy weather followed by sunny days toward the weekend. To maximize ryegrass seed yield and quality, previous field experience suggest the seed moisture should be below 40% moisture before swathing. As ryegrass seed moisture moves below 40%, seed dry down can proceed at a rapid pace. In hot, windy days seed moisture declines of over 2 points/day have been documented! As always, environmental and specific field conditions will influence the actual swathing date for ryegrass.

Several ryegrass fields were harvested last week and harvest will continue for a couple of weeks.

PEST MANAGEMENT

Light infestations of grasshoppers have been observed in isolated ryegrass fields. Field edges are the most likely location in the field to observe this insect pest. Insect infestations are not to threshold yet, but keep an eye open for this insect pests as ryegrass is being swathed.

CROP MANAGEMENT

Ryegrass Seed Storage

As we get into ryegrass harvest seed moistures off the combine can range from dry, <10%; to wet, >16%. Ryegrass seed quality can be influenced by seed moisture, especially if the moisture content of the seed going into storage is greater than 11-12%. Ryegrass seed moisture greater than 12% may require supplemental heat, in addition to air, to dry the seed to a moisture level suitable for long term storage. Monitor moisture content of ryegrass seed and be prepared add supplemental air, or move seed, in order to the cool seed, reduce hot spots or lower seed moisture content of ryegrass seed in storage. With variable moisture levels of ryegrass seed, it's CRITICAL to monitor the seed moisture content of ryegrass seed in the bin.

Air bins can help reduce seed temperature and help maintain ryegrass seed quality during storage. Air flow resistance and fan pressure are usually expressed in inches of water in a column. This term comes from gauges 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 air is moving and how long and narrow the paths for air movement. 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

If hot spots develop when ryegrass seed is storage, air alone may not remove the heat and seed moisture fast enough. If hot spots are detected, be prepared to move seed from the bin as soon as possible as past experience suggests ryegrass seed moisture in the 11-12% range is required for long term seed viability and storage.

Next week's newsletter will be released on August 1st, 2018.