MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 30, 2017

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2017 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. Thus far in 2017, we have accumulated 3,024 GDD, as of July 30th (Table 1). Last week, the accumulated GDD was 265 (37.9/day) which is above the average GDD accumulation of 234 (33.4/day) for the last week in July. For the week ending August 6th the forecast predicts an accumulation of 231 GDD (33/day) which about average 229 GDD (32.7/day) for the first week of August.

Table 1. Growing degree days (GDD), March - July 2011 to March - July 2017 near Roseau MN.

Year	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2017 vs. 16**
March	90	38	119	0	0	304	7	+52
April	285	263	367	159	80	370	278	+22
May	679	765	659	654	640	726	639	-86
June	917	945	941	964	975	979	898	-28
July		1,123	1,147	1,066	1,088	1,230	1,162	
July1-30	1,053							
Total	3,024	3,134	3,030	2,843	2,783	3,609	2,984	
July 31- Aug 6*	231							

* Forecasted GDD at Roseau for the next 7 days.

GENERAL CROP CONDITION

Last week was a busy one for ryegrass swathing and this week look for that to continue in spring seeded ryegrass. The short term forecast suggests several days of dry weather. To maximize ryegrass seed yield and quality, previous field experience suggest the seed moisture should be below 40% moisture before swathing. With this dry weather, ryegrass maturity will proceed at a rapid pace. As ryegrass seed moisture gets close to the to the 40% mark, seed dry down can proceed at a rapid pace, over 2 points/day! 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 this week.

PEST MANAGEMENT

As mentioned in a previous newsletter, rust in ryegrass is showing up on seedling ryegrass under seeded to wheat (2018 harvest). Both leaf and stem and crown rust has been observed. Previous research has NOT shown a benefit from a fungicide application for rust control, on seedling ryegrass, in late summer or early fall.

Light infestations of grasshoppers have been observed in isolated ryegrass fields. Field edges are the most likely part of 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

Ryegrass seed moistures, at harvest, 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. Make sure to monitor moisture content of ryegrass seed in storage and be prepared add supplemental air, or move seed, in order to 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 8th, 2017.