MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 27, 2018

SUMMER GRASS SEED FIELD TOUR TONIGHT

The annual grass seed field tour is scheduled to begin at 5:00 pm, today at the U of MN Magnusson Research Farm. Directions to the Magnusson Research Farm; from the intersection of Hwy 11 and 89 travel 2 miles north on Hwy 310, turn left (west) off Hwy 310 onto Roseau County 16 and continue west for approximately 3 miles. The farm is located on the north side of Hwy 16. Grass seed variety trials include: bluegrass, fescue, intermediate wheatgrass and perennial ryegrass. Management projects include: biomass and vegetation composition research, weed control research in fescue and ryegrass, fertility rate and timing in ryegrass, wheatgrass date of planting trials, ryegrass growth regulators, fungicides and other trials will be included on the tour.

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 = 1,779 (Table 1)
- Average temperatures for the last week of June, high of 75.1 F and low 51.1 F
- Average GDD accumulation for last week of June = 220 (31.4/day)
- Current 10 day forecast projects daily highs in the mid 80's and lows in the low 60's
- Projected 10 day GDD = 398 (39.8/day)
- Current 10 day forecast continues to projects warmer than average temperatures (+8.4 GDD/day)

Table 1. Growing degree days (GDD), March - June 2012 to March - June 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		917	945	941	964	975	979	
June 1-24	780							
Total	1,779	1,944	2,011	2,086	1,777	1,695	2,379	
*June 27 - July 4	398							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Small grain fields in the area will be heading by the end of the week. After the one of coolest April's on record it doesn't seem possible that wheat should be heading already! Yes, April of 2018 was one of the coolest on record, but it was followed by two months of warmer that average temperatures. As the data in Table 2 indicates, every week in May, and thus far in June, daily accumulated GDD are higher than the long term average.

Table 2. Daily Growing Degree Day (GDD) departure from average as recorded by NDAWN sites averaged over three locations in northern MN in 2018.

Week Ending	**5-2**	**5-9**	**5-16**	**5-23**	**5-30**	**6-6**	**6-13**	**6-20**	**6-27**
GDD/day	+6.4	+9.9	+6.1	+8.4	+9.3	+9.4	+7.3	+10.4	+8.4

What does the accelerated temperatures mean for crop growth and development? Thus, far ryegrass seedhead expression appears to be normal and judging from the pollen clouds over the weekend, pollination appears to be going well. Time will tell what impact, if any, these accelerated temperatures will have on crop growth, development and yield as we continue with pollination and move into the seed filling phase.

PEST MANAGEMENT

Insects in ryegrass

Grasshoppers have been found in area ryegrass fields. At this time, insect infestations are NOT to threshold levels. Generally, grasshoppers can first be found on field edges and as time goes on, move into the field interior. Ryegrass field scouting will determine the level of insect pressure. Action thresholds for grasshopper nymphs are 30-45/square yard for nymphs and 6-8 for adults, or 25% defoliation. If grasshopper adults begin to feed on the head, this action threshold will be much lower. Field scouting will determine the level of insect pressure in ryegrass fields and if treatment is needed. Consult with your agronomist or fieldman for product/s that have been successfully used in ryegrass in your area.

Rust in ryegrass

One of the first places to look for ryegrass rust is lodged areas of the fields. 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. Crown rust has been documented to overwinter in northern MN with buckthorn is an alternate host for this disease pathogen. Leaf and stem rust has not been documented to overwinter in northern MN and the spores of this pathogen must be carried into the area on southerly winds. Leaf and stem rust develops rapidly when rain or dew is present on 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.

As mentioned above, leaf and stem rust that infects ryegrass is carried into our area on southerly winds. Barberry is an alternate host for this disease pathogen. Rust infection and spread is most likely with daily high temperatures in the mid -70’s and lows in the 60’s. Rust also requires free water on the leaf surface. We usually have dew on the grass until mid-morning in the summer and many days have temperatures that fit into the ideal range for rust development.

Next week’s newsletter will be released on July 3rd, 2018.