MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 14, 2022

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's (from snow melt to swathing) will be tracked in the 2022 growing season with comparisons to the previous six years. A base temperature, T-Base = 32 degrees F, will be used for perennial ryegrass.

- Year to date GDD = 1,064 (Table 1)
- Last week (June 6 - June 12) accumulated GDD = 214; the long term average = 186
- Projected GDD for the next 10 days = 405, or 40.5/day (Table 1)
- Average GDD for the third week of June = 197, or 28.1/day
- The 10 day forecast suggests warmer than average temperatures for mid-June as the projected GDD is 40.5/ day vs the long term average of 29.2/day.

Table 1. Growing Degree Days (GDD), March - June 2016 to March - June 2022 near Roseau MN.

Year	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2022 vs. 2021**
March	0	131	30	0	0	90	38	-131
April	95	236	183	211	184	458	263	-141
May	649	640	600	548	815	679	765	+9
June 1-12	320							
June		1,007	995	919	1,007	917	945	
Total		2,014	1,808	1,678	2,006	2,144	2,011	
*June 13-22	405							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The ten day forecast indicates a significant warming trend as the projected GDD are over 40/day. The long term average daily GDD for mid-June is 29.2. The projected daily GDD of 40.5 is 11.3 GDD/day higher than the long term average. With recent rainfall and the projected warming trend, both ryegrass and weeds will grow at a rapid pace. In ryegrass with healthy crowns look for ryegrass to begin the heading stage of growth this week. The growth stage of ryegrass plants that had injured crowns this spring are more variable and generally the developmental stages lag behind ryegrass fields with healthy crowns by several days to over two weeks. Depending upon the stage of ryegrass growth the week ahead will be a busy one for the application of a growth regulator, or general weed control.

SUMMER GRASS SEED FIELD TOUR – JUNE 29

The annual grass seed summer tour is scheduled for June 29th with the field tour to begin at 5pm at the U of MN Magnusson Research Farm. Directions to the U of MN Magnusson Research Farm. At the intersection of MN Hwy 11 and 310, proceed north on MN 310 for approximately 2 miles, turn left (west) on Roseau County 16 and proceed west for approximately 3 miles. The U of MN Research Farm is located in the north side of Roseau County 16. Information on specific field tour stops will follow in future newsletters.

CROP MANAGEMENT

Many spring seeded perennial ryegrass fields are making the transition from jointing to the early heading stage of growth. Previous research at the U of MN Magnusson Research farm indicates that the beginning of heading, on the main stem, is a good time to apply a growth regulator in perennial ryegrass grown in the environmental conditions of northern MN. A review of some of the best management practices, based on several year's research, with growth regulators in perennial ryegrass results was in the May 31, 2022 newsletter

In the last week or so, several perennial ryegrass fields with yellowing and reduced growth have been reported. If the perennial ryegrass field has not had nitrogen applied now would be the time to get this done. If nitrogen fertilizer has been applied the first thing that comes to mind would be nitrogen deficiency due to nitrogen losses. We have had more than average precipitation this spring and a loss of applied nitrogen is a possibility. The other potential explanations would be the nitrogen has moved deeper in the ryegrass rooting zone and will be available as the ryegrass roots grow deeper in the soil profile. A sulfur deficiency, in perennial ryegrass, will have exhibit symptoms similar to a nitrogen deficiency. A tissue test can help with this diagnosis. If possible take a tissue sample in areas of the field that the growth appears normal and another one in areas of the field that show deficiency symptoms.

PEST MANAGEMENT

After a couple weeks of low to no armyworm moth counts, the weekend of June 10-13, had a total of 45 moths captured in four traps in located in perennial ryegrass fields. Southerly winds and low level jet streams (850 mb) appear to be a factor in armyworm moth movement. It takes approximately 8-10 days for the eggs to hatch (eggs tolerant to insecticides) and about 3 to 4 weeks for the armyworm caterpillar to pass through 6 instar stages. As the temperatures increase the timeline for armyworm development will shorten. Field scouting in mid-to late June will determine the level of armyworm caterpillars in perennial ryegrass fields. More on armyworms in next week's newsletter.

ISOLATION STRIPS IN GRASS SEED CROPS

Many grass seed fields require an isolation strip in the certification process. Kris Folland is the local Field Supervisor with the Minnesota Crop Improvement Association (MCIA). If you have questions or concerns please contact your grass seed agronomist, seed conditioner or Kris with MCIA (218-791-2156).

Next week's newsletter will be released on June, 21st