MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 23, 2024

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's will be tracked in the 2024 growing season with comparisons to the previous seven years. The accumulation of GDD's will begin after the snow has melted from the perennial ryegrass fields and continue through swathing. A base temperature of 32 degrees F is used for perennial ryegrass (T-Base = 32 F).

- Year to date GDD = 2,538 (Table 1)
- GDD last week (July 15 - 21) = 232; Long term average = 239
- GDD projected in next 10 days = 407 or 40.7/day (Table 1)
- Average GDD for the end of July = 234 or 33.4/day
- The ten-day forecast suggests warmer than average temperatures for the end of July. Projected GDD is 40.7/day compared to the long-term average of 33.4/day.

Table 1. Growing Degree Days (GDD), March - July 2017 to March - July 2024 near Roseau MN.

Year	**2024**	**2023**	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2024 vs. 2023**
March	0	0	0	131	30	0	0	90	0
April	296	93	95	236	183	211	184	458	+203
May	653	959	649	640	600	548	815	679	-306
June	859	1,064	959	1,007	995	919	1,007	945	-205
July 1-21	730								
July		985	1,104	1,174	1,179	1,067	1,100	1,123	
Total		3,101	2,807	3,188	2,987	2,745	3,106	3,233	
*July 22-31	407								

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The new ten-day forecast suggests temperatures well above average for the end of July. Spring seeded perennial ryegrass fields are beginning to lose their green color. With the projected warm temperatures perennial ryegrass will mature at a rapid pace. Monitor these fields several times a week as when ryegrass seed moisture drops into the low 40% as seed moisture losses can be over 3% points/day.

CROP MANAGEMENT

With ryegrass beginning to turn from green to light brown, swathing will be right around the corner. When to swath perennial ryegrass? The swathing decision is a balancing act, not to cut the late-maturing seeds too early and the early-maturing seeds too late. When ryegrass is cut too early (high seed moisture content) will shorten the seed filling time which leads to immature seeds and reduced seed size and weight. Cutting too late (lower seed moisture) will reduce seed yield due to increased shatter in the swathing and harvesting operations.

The following ryegrass swathing data is from the U of MN Magnusson Research Farm (Table 2). Data in Table 2 suggests that ryegrass swathing in the mid-30's is the 'sweet spot'. Significant seed yield losses occurred when ryegrass was swathed when the seed moisture content was over 40% or when seed moisture levels dropped into the high 20's. Seed shatter can be reduced if swathing is conducted with dew on the plant foliage.

Table 2. Ryegrass seed yield, seed moisture and test weight influenced by cutting date average over two small plot locations (Rice Farms and U of MN Mag Farm in 2014).

Sample Date	Seed Yield*	Seed Moisture**	Test Wt.***
	(% of the mean)	(%)	(#/bu)
7/30	96.9	46	28.5
8/1	93.8	43	29.2
8/3	107.5	40	29.3
8/5	110.2	38	29.9
8/7	121.7	34	30.1
8/9	93.9	28	31
8/12	88.8	26	31
LSD (0.05)	6.2		

*Mean seed yield U of MN Mag Farm = 1,368#/acre and Rice Farms 1,348#/acre
** Seed moisture determined by microwave oven
*** Clean seed test weights corrected to 12.5% moisture

PEST MANAGEMENT

Late season rust has been observed at the U of MN Magnusson Research Farm in areas of perennial ryegrass NOT sprayed with a fungicide. Rust will not cause significant yield losses in perennial ryegrass fields that are turning brown and drying down. If the ryegrass field is still green and shedding pollen, a fungicide application may be management practice to consider.

Isolated pockets of armyworm larvae have been observed in perennial ryegrass fields in the last couple of weeks. Remember, armyworm larvae that are over an inch long will soon pupate. If armyworms are in the ½ to ¾ inch long, these are the ones that can cause considerable damage if the population is high (3-4/square foot). If armyworms are climbing up the ryegrass stem and cutting off the seed head an insecticide application may be warranted with fewer armyworms.

Isolated pockets of grasshoppers have been observed that required an insecticide treatment. Grasshoppers tend to move on to ryegrass fields from other crops or field ditches. A management consideration is to spray a couple spray widths into the fields.

Next week's newsletter will be released on July 30th.