**MINNESOTA TURF SEED COUNCIL**
**NEWSLETTER**
**July 25, 2023**

## PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's will be tracked in the 2023 growing season with comparisons to the previous six 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 = 2,827 (Table 1)
- GDD last week (July 17-23) = 226; Long term average = 239
- GDD projected in next 10 days = 376 or 37.6/day (Table 1)
- Average GDD the first week of August = 229 or 32.7/day
- The ten-day forecast suggests warmer than average temperatures for the end of July. Projected GDD is 37.6/day compared to the long-term average of 33.4/day.

Table 1. Growing Degree Days (GDD), March - July 2017 to March - July 2023 near Roseau MN.

| **Year** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** | **2017** | **2023 vs. 2022** |
|---|---|---|---|---|---|---|---|---|
| March | 0 | 0 | 131 | 30 | 0 | 0 | 90 | 0 |
| April | 93 | 95 | 236 | 183 | 211 | 184 | 458 | -2 |
| May | 959 | 649 | 640 | 600 | 548 | 815 | 679 | +310 |
| June | 1,064 | 959 | 1,007 | 995 | 919 | 1007 | 945 | +105 |
| July1-23 | 711 | | | | | | | |
| July | | 1,104 | 1,174 | 1,179 | 1,067 | 1,100 | 1,123 | |
| Total | | 2,807 | 3,188 | 2,987 | 2,745 | 3,106 | 3,233 | |
| *July 24-Aug 2 | 376 | | | | | | | |

* Forecasted GDD at Roseau for the next 10 days.

## GENERAL CROP CONDITION

Perennial ryegrass swathing continued at a rapid pace last week and will continue this week. Combines have been out in ryegrass fields and will become more active this week. The new 10-day forecast suggests warmer and drier than average which will be a positive for ryegrass harvest this week.

## CROP MANAGEMENT

Spring wheat is beginning to turn color which is a reminder that small grain harvest is not that far off. In the environmental conditions of northern Minnesota, late summer seeding of perennial ryegrass can be an effective method of stand establishment. Late summer seeding of perennial ryegrass has been successfully seeded into fallow ground, or into stubble (wheat and canola) if the wheat or canola is harvested in early to mid-August. Seeding date trials conducted at the U of MN Magnusson Research Farm indicate that seeding ryegrass in late August gave the highest yields and dry matter accumulation the next growing season (Table 2). Further, a significant decline in ryegrass yields and accumulated dry matter was detected as seeding date was delayed to mid-September into October.

Table 2. Perennial ryegrass 'Arctic Green' date of seeding trial conducted at the U of MN Magnusson Research Farm in 2007.

| Seeding Date* | Seed Yield** | Dry Matter ** |
|---|---|---|
| | (#/acre) | (tons/acre) |
| 8/23 | 1,557 | 3.00 |
| 8/30 | 1,695 | 3.36 |
| 9/6 | 1,276 | 2.43 |
| 9/13 | 1,128 | 2.14 |
| 9/20 | 892 | 1.58 |
| 9/27 | 508 | 0.89 |
| 10/4 | 116 | 0.37 |
| LSD (0.05) | 319 | 0.63 |

* Plots were watered after each seeding date

** Perennial ryegrass seed yields (#/ac) and dry matter yields (tons/ac) were averaged over the fallow seeding with a wheat cover crop and, plots seeded directly into wheat stubble.

The following are management practices to consider when seeding perennial ryegrass in late summer:

- A preharvest application of Roundup will control weeds and help dry down the wheat (desiccant in direct harvest canola) which may allow an earlier seeding of ryegrass into wheat or canola stubble.
- If an application of Roundup was not applied preharvest, consider an application after wheat or canola harvest and prior to ryegrass seeding for general weed control.
- Spend the time setting the combine to get a uniform spread of wheat straw or bale the straw and remove bales as soon as possible.
- Apply the P& K for next year's ryegrass crop after wheat or canola harvest.
- Consider a harrow operation to spread crop straw and fines prior to seeding ryegrass.

The management of a perennial ryegrass crop to be harvested in 2024 begins with crop harvest. The distribution of crop straw from the back of the combine is a critical step in ryegrass management. A little extra time to get a uniform spread of straw will pay dividends in ryegrass stand uniformity and seed yields in the 2024 crop.

## PEST MANAGEMENT

With ryegrass swathing underway pest management is usually not a cost-effective strategy. An exception would be armyworms. If armyworms are detected in lodged ryegrass, an insecticide application may be warranted as after swathing these worms will concentrate under the swathed windrow, can consume ryegrass, and could be an issue in the harvest operation.

Next week's newsletter will be released on Aug 2nd.