

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 24, 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 = 497 (Table 1)
- Last week (May 16 - 22) accumulated GDD = 114; the long term average = 151
- Projected GDD for the next 10 days = 259, or 25.9/day (Table 1)
- Average GDD for the end of May = 175, or 25/day
- The 10 day forecast suggest average temperatures for the end of May as projected GDD 25.9/day vs the long term average of 25/day.

Table 1. Growing Degree Days (GDD), March - May 2016 to March - May 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 1-22 | 402 | | | | | | | |
| May | | 640 | 600 | 548 | 815 | 679 | 765 | |
| Total | | 1,007 | 813 | 759 | 999 | 1,227 | 1,066 | |
| *May 24-June 1 | 259 | | | | | | | |

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

Perennial ryegrass plants with healthy crowns are in the tillering stage. Ryegrass plants that had small crowns last fall, or experienced cold temperatures due lack of snow cover, water ponding, ice sheeting or other environmental stress will need additional time to access the degree of winter survival.

Lake of the Woods – Ice-Out Date

The date when lakes are free of ice (ice-out date) is an indication of the “earliness” or “lateness” of spring. In 2022, the ice-out date on Lake of the Woods was May 16th which is thirteen ten days later than the median date of May 3rd (Table 2). The earliest recorded ice-out date is April 8th in 2012. The latest ice-out date was recorded on May 21st in 2014. It's interesting to note that the earliest and latest recorded ice-out on Lake of the Woods are only two years apart in 2012 and 2014

Table 2. Ice out date on Lake of the Woods from 2011 to 2022.

| 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
|--------|----------|-------|--------|--------|----------|-------|-------|--------|--------|---------|-------|
| May 16 | April 23 | May 2 | May 14 | May 14 | April 24 | May 4 | May 3 | May 21 | May 15 | April 8 | May 5 |

*Median ice-out date for Lake of the Woods is May 3rd (MN DNR Website)

Lake Bronson in Kittson County recorded an ice out date of May 4th 2022 which is the latest on record. The median ice out date is April 15.

CROP MANAGEMENT

The assessment of perennial ryegrass stands in fields that have experienced winterkill from an environmental stress can be a challenge. Typically, the areas of winterkill in perennial ryegrass fields are not uniform, rather irregular patterns in the field. One method to assess stand is the use of a grid to determine the presence or absence of plants. The grid frame used to collect data in Table 2 had a total area of 30 inches x 30 inches and each individual squares was 6 x 7.5 inches. The data in Table 2 indicates that ryegrass stands of 56 and 73% produced similar ryegrass seed yields. However, ryegrass stands of 39% produced 553# of ryegrass seed compared to over 1,000 pounds/acre for 56 and 73% stand.

Table 2. Perennial Ryegrass 'Quest' spring stand evaluation at Magnusson Farms in 2009

| Stand* | Seed Yield (#/acre) |
|--------|---------------------|
| 39% | 553 |
| 56% | 1048 |
| 73% | 1066 |

*A 6" x 7.5" grid frame was used to assess ryegrass stand. If at least one ryegrass plant was in the square that was a positive count and if no ryegrass plants were in the square that was a negative count. Data presented is the % of grid squares that had a ryegrass plant averaged over four replications.

PEST MANAGEMENT

Many winter annual weeds are bolting, clovers are growing well and dandelions are in full flower. Cool season annual weeds are emerging including: wild buckwheat, wild mustard, wild oats, smartweeds and common lambsquarters. Warm season weeds have yet to emerge (barnyardgrass, pigweeds, green and yellow foxtail), which creates a dilemma for full-season weed control in perennial ryegrass. If broadleaf control was not applied last fall, now would be a good time to scout fields to determine the type of weeds present and growth stage of these weeds. If field scouting indicates winter annuals are present, now would be a time to get these fields sprayed. A second application for broadleaf weed control, later in the season, may be necessary depending upon the level of infestation of warm season broadleaf weeds.

Barnyardgrass and foxtail (green and yellow) seeds can be an issue in the seed cleaning and conditioning of perennial ryegrass. Both of these species are warm season grasses and can have extended germination depending upon rainfall patterns. One strategy for enhanced control would be to delay the application of a grass herbicide to allow more barnyardgrass and foxtails plants to emerge. Another option would be to apply a preemergence herbicide. If the ryegrass stand is variable with bare areas (gaps), a preemergence herbicide can offer extended control. Perennial ryegrass, that has overwintered, can tolerate Prowl (2-3 pints) and Dual (1 pint) when mixed with post emergence broadleaf herbicides in perennial ryegrass. A delayed preemergence herbicide may offer extended weed control of small seeded grasses and broadleaf weeds. Ideally, a rainfall event after application will help with the activation of the preemergence herbicide.

Next week's newsletter will be released on May, 31.