MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 15, 2021

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Perennial ryegrass GDD's will be tracked in the 2021 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 will be used for perennial ryegrass (T-Base = 32 F).

- Year to date GDD = 1,505 (Table 1)
- Last week (June 7-13) accumulated GDD = 262
- Average GDD for the first week of June = 186
- Projected GDD for the next 10 days = 333, or 33.3/day (Table 1)
- Average GDD for mid-June = 197, or 28.1/day
- The new 10 day forecast suggest a return to more normal temperatures for the end of June as the projected GDD accumulation is 33.3/day compared to the long term average of 30.3/day.

Table 1. Growing Degree Days (GDD), March - June 2015 to March - June 2021 near Roseau MN.

Year	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2021 vs. 2020**
March	131	30	0	0	90	38	119	+101
April	236	183	211	184	458	263	367	+53
May	640	600	548	815	679	765	659	+40
June1-13	498							
June		995	919	1,007	917	945	941	
Total	1,505	1,808	1,678	2,006	2,144	2,011	2,086	
*June 14-23	333							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The new 10 day forecast points to a return to more normal temps after several weeks of above average day-time high temperatures. Perennial ryegrass fields are heading and will soon be shedding pollen. Perennial ryegrass plants typically shed pollen mid-morning and pollen clouds can be observed moving across fields. When perennial ryegrass is shedding heavy pollen it looks like dust from vehicles driving on gravel roads

SUMMER GRASS SEED FIELD TOUR - JULY 1

The annual grass seed summer tour is scheduled for July 1st 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

Now that perennial ryegrass is heading is it too late to apply a growth regulator? As of 6/14/21, spring seeded perennial ryegrass at the U of MN Magnusson Research Farm was approximately 50% headed and averaged 14 inches tall. Based on historical records ryegrass harvest heights will be in the mid-to high 20 inches tall in the absence of a growth regulator with good growing conditions. If environmental conditions are hot and dry perennial ryegrass height will in in the low to mid-20 inches tall in the absence of a growth regulator. With the rainfall received last week the expectation would be that ryegrass not treated with a growth regulator will be in the mid-20 inches tall at harvest. If this assumption is correct, perennial ryegrass has 8 to 10 inches of vertical growth before maturity. Based on these assumptions it still would be a good management decision to apply a growth regulator in spring seeded perennial ryegrass.

PEST MANAGEMENT

Grasshoppers

Grasshoppers have been observed in ryegrass fields at levels that have required an insecticide treatment. The recent warm weather seems to be ideal for grasshopper growth and development. Field observations suggest seagulls are feeding on grasshoppers. If seagulls are flying around a ryegrass field grasshoppers may be at a level that may require an insecticide treatment. As always, field scouting will determine the type of insect and intensity level in perennial ryegrass fields.

Crown Rust and Leaf & Stem Rust

The 2021 season has accumulated enough GDD's for crown rust infections in perennial ryegrass. Crown rust pustules are orange in color while leaf and stem rust is red color. In northern MN conditions we typically can see Crown rust after 1,500 and leaf and stem rust after the accumulation of 1,900 GDD. Previous fungicide research in perennial ryegrass is available on the web: https://turf.umn.edu/seed-production-newsletters.

More on leaf and stem rust in next week's newsletter.

Late season broadleaf weed control

Several questions have been asked about late season broadleaf weed control in perennial ryegrass. What is the injury potential from broadleaf herbicides applied to headed perennial ryegrass? Research conducted at the U of MN Magnusson Research Farm indicates that headed perennial is tolerant to many broadleaf herbicides. The data set in Table 2 is from research conducted in 2012. Herbicides were applied to 'Arctic Green' that was 60% headed with minimal weed pressure.

Table 2. Late season broadleaf weed control applied to 'Arctic Green' perennial ryegrass at the U of MN Magnusson Research Farm in 2012

Treatment	Rate/acre	Seed Yield (#/acre)	Seed Yield (% of untreated)
MCPE	1 pint	1433	107.8
2,4-D amine	1 pint	1439	108.3
Aim	1 oz + 0.25% NIS	1350	101.6
2,4-D+Clarity	1+1pint	1320	99.3
Basagran	1.5 pint +1%MSO	1302	98.0
2,4-D ester	0.75 pint	1299	97.7
Stinger	6 oz	1296	97.5
Clarity	1 pint	1252	94.2
Untreated		**1329**	**100**
LSD (0.05)		137	10.3

Next week's newsletter will be released on June 22nd.