

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 21, 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 = 1,318 (Table 1)
- Last week (June 13 - June 19) accumulated GDD = 254; the long term average = 197
- Projected GDD for the next 10 days = 366, or 36.6/day (Table 1)
- Average GDD for the fourth week of June = 212, or 30.3/day
- The 10 day forecast suggests warmer than average temperatures for end of June as the projected GDD is 36.6/ day vs the long term average of 30.9/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 1-19	574							
June		1,007	995	919	1,007	917	945	
Total		2,014	1,808	1,678	2,006	2,144	2,011	
*June 20-29	366							

* Forecasted GDD at Roseau for the next 10 days.

GENERAL CROP CONDITION

The ten day forecast indicates a continuation of the warming trend of last week as the projected GDD are over 36/day. 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

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).

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 heading. 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

<u>Treatment</u>	<u>Rate/acre</u>	<u>Seed Yield (#/acre)</u>	<u>Seed Yield (% of untreated)</u>
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
<u>Untreated</u>		<u>1329</u>	<u>100</u>
LSD (0.05)		137	10.3

PEST MANAGEMENT

Leaf Rust

In the last two weeks we have had 10 days of winds out of a southerly direction. In addition, in this same two week period, 50% of the days had a maximum wind speed of over 25 mph. Armyworm moths and leaf rusts are two potential pests that can cause economic damage in perennial ryegrass seed production fields. Perennial ryegrass grown in MN is susceptible to two types of rust, crown and leaf and stem rust. Historically, crown rust has been detected after the accumulation of 1,500 GDD and leaf and stem rust after 1,700 GDD. Leaf and stem rust has the potential to cause more economic damage in perennial ryegrass fields than crown rust. More on rusts next week’s newsletter.

Armyworms

Last weekend (June 18-19) over 25 armyworm moths were captured in 4 traps in Roseau and Lake of the Woods Counties. This is the third documented surge in moth capture in 2022. The others were over Memorial Day weekend and June 10-13. 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. Field scouting has identified armyworm caterpillars in the first to second instar stage, 1/8 to 1/4 inches long. Most likely these caterpillars hatched from eggs laid over flights over Memorial Day weekend. These multiple flights of armyworm moths into the area result in caterpillars of various growth stages depending upon moth flights and when the eggs are laid. Data from Guppy indicate that armyworm caterpillar instar stages 1-4 account for only 6% of the feeding damage, instar stage 5 (up to 3/4 inch) approximately 15% and instar stage 6 (up to 1.25 inch) approximately 80% of the feeding damage. Field scouting will determine armyworms stages and infestation levels. The current economic threshold for larger armyworms caterpillars in grass crops are 4-5 larvae/square foot.

Next week’s newsletter will be released on June, 28th