

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
May 23, 2017**

PERENNIAL RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2017 growing season with comparisons to the previous six years. A base temperature of 32 degrees F will be used for ryegrass (T-Base = 32 F)

Reported GDD are based on the total accumulation from the beginning of the calendar year to the current date. Thus far in 2017, we have accumulated 824 GDD as of May 21st (Table1). Last week, the accumulated GDD was 136 (19.4/day) which is below the long term average of 151 (21.6/day) for the third week of May. Forecast for the week ending May 28th suggests normal temperatures as projected GDD accumulation of 168 (24/day) compared to the average of 175 (25/day).

Table 1. Growing degree days (GDD), March - May 2011 to March - May 2017 near Roseau MN.

Year	2017	2016	2015	2014	2013	2012	2011	2017 vs. 16
March	90	38	119	0	0	304	7	+52
April	285	263	367	159	80	370	278	+22
May		765	659	654	640	726	639	
May 1-21	449							
Total	824	1,066	1,145	813	720	1,400	924	
May 22-28*	168							

* Forecasted GDD at Roseau for the next 7 days.

GENERAL CROP CONDITION

Ryegrass fields seeded in the spring of 2016 are in the late tillering to the early jointing stage. As ryegrass begins to joint, look for ryegrass to extend over the top of the wheat stubble. Ryegrass fields seeded in the late summer of 2016 exhibit more variable growth stage and plant height compared to spring seeded ryegrass.

PEST MANAGEMENT

Winter annuals (dandelion, shepardspurse, and cockle) are growing well, bolting and flowering. Dicamba and 2, 4-D are the workhorses for broadleaf weed control in perennial ryegrass seed production fields. Perennial ryegrass is very tolerant of these two products. A tank mix of dicamba and 2, 4-D (0.5-1pt of each) is an effective broad-spectrum broadleaf control option for weed control in ryegrass. If the broadleaf weed control program includes a fall and spring application timing, the spring application timing can be extended compared to a spring only program. A spring only program for broadleaf weed control will have to be made soon (minimum of 0.75pt dicamba & 2, 4-D) order to control winter annual weeds that are now bolting and flowering! Weeds grow fast and regular scouting is essential to determine the best weed control program in your ryegrass fields.

Barnyardgrass, a grassy weed, appears to be increasing in prevalence in many perennial ryegrass fields, especially in thin ryegrass stands and low areas of fields. Field observations suggest this weed has an extended germination period that seems to be tied to rainfall events in the spring and summer. May want to consider a pre-emergence herbicide for extended control, or plan on a split application of a post emergence herbicide to provide season long barnyardgrass control.

CROP MANAGEMENT

Can liquid nitrogen, at rates over 3 gallons/acre, be used to supplement nutritional requirements in ryegrass? This question is being asked due to potential nitrogen losses from surface applied urea with limited rainfall after application. The following results were obtained from research conducted at the U of MN Magnusson Research Farm in 2014.

Table 2. Liquid nitrogen (28%UAN) applied at various timings in perennial ryegrass ‘Arctic Green’ in 2014

Treatment Ω	Seed Yield (#/acre)	Lodging (1-9 scale*)	RCI (Index0)	Color (1-9 scale*)
None	1441	3.0	188	4.5
28% @ 12 gpa**	1570	4.8	229	7.5
28% @ 24 gpa**	1686	7.3	256	8.0
28% @ 12 Gpa + 12 gpa water [^]	1488	5.0	235	7.0
28% @ 12 Gpa+12 gpa water [#]	1437	6.0	210	7.5
LSD (0.05)	170	2	95	2

Ω Liquid 28%UAN= 3#N/gallon (12gpa=36#N per acre, 24gpa=72#N/acre)

* 1-9 scale – 1= no lodging and light green color; 9 = flat on ground and deep green color

**Applied 6/10/14 to 3-4 node ryegrass. 28% nitrogen only.

[^]Applied 6/13/14 to 3-4 node ryegrass. A 50/50 mix of 28% and water.

[#]Applied 6/20/14 to ryegrass that was 60% headed. A 50/50 mix of 28% and water.

All treatments were applied with flat fan nozzles delivering 12 or 24gpa. Ryegrass, at the time of application, didn’t show visible signs of nitrogen stress. Fertility program for this trial 30-30-30-5s applied in the fall and 100-0-0 applied in the spring. Results from this trial indicate:

- Perennial ryegrass was tolerant to 28% nitrogen up to 24 gpa, some leaf burn was observed but seed yields were equal to or better than untreated plots
- 28% applied early 6/10 appeared to be more beneficial, to improved seed yield, than 28% applied later, 6/13 or 6/20
- 28% nitrogen diluted 50/50 with water gave similar seed yield as untreated, but caused more lodging and a greener plant (delayed maturity)
- Post emergence 28% caused more lodging, and enhanced greenness compared to the untreated
- Results suggest 28% is an option for supplemental nitrogen applications, especially if applied prior to ryegrass heading

SUMMER GRASS SEED FIELD TOUR -JUNE 28

Mark your calendar for the annual grass seed summer tour. The tour this summer is scheduled for 5:00 pm on Wednesday, June 28th at the U of MN, Magnusson Research Farm. Directions to the Magnusson Research Farm; from the intersection of Hwy 11 and 89 travel approximately 2 miles north on Hwy 310, turn left (west) off Hwy 310 onto Roseau County 16 and for approximately 3 miles. The farm is located on the north side of Hwy 16. More information on specific tour stops will follow in future newsletters.

Next week’s newsletter will be released on May 30th, 2017.