

**MINNESOTA TURF SEED COUNCIL
NEWSLETTER
July 29, 2014**

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2014 growing season with comparisons to the previous five 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 year to the current calendar date. To date in 2014, we have accumulated 2,622 GDD as of July 27th (Table1).

The average high and low temperatures for the end of July are 77 and 56 F, respectively. The most recent ten day forecast near Roseau projects average high and low temperatures of 80 and 55 F, respectively. By August 6th, accumulated GDD for the year will be 2,980 based on this new 10 day forecast.

Table 1. Growing degree days (GDD) for March to June, near Roseau, MN in 2009-2014.

Year	2014	2013	2012	2011	2010	2009	2014 vs. 13
March	0	0	304	7	137	30	0
April	159 [^]	80	370	278	476	247	-2
May	654	640	726	639	707	515	+14
June	964	975	979	898	911	860	-11
July 1-27	926						
July 27-Aug 3*	248						
July**	1,116	1088	1230	1162	1174	943	
Total***	2,812	2,783	3,609	2,984	3,405	2,595	

[^] -78 GDD after majority of snow drifts melted

* - Forecasted GDD at Roseau for the next 7 days

** - Projected GDD for July based on an average of 36 GDD/day

*** - Total for 2014 includes projected GDD for July

GENERAL CROP CONDITION

Spring seeded ryegrass fields are turning color and most likely, swathing of isolate fields will begin later in the week. It seems that our eyes are trained to look at the most mature areas of the ryegrass fields. When making a determination on when to cut ryegrass, make sure a **representative sample is taken from the entire field not just the areas that are most mature**. One method to get a representative field sample is to take samples from areas that look mature, from areas that are intermediate and from areas of the field that look green. Note the percentage of the field in each of these categories. This will give you a good overall field estimate of maturity. To maximize ryegrass seed yield and quality, previous field experience suggest the seed moisture should be below 40% moisture before swathing. As the ryegrass plant matures, fields can mature quickly, especially with warm days of late July into August. When ryegrass is close to the 40% moisture level, seed moisture can drop 2% points or more per day! Consult with your field agronomist to help determine the appropriate time for swathing ryegrass as environmental and specific field conditions will influence the actual swathing date for ryegrass.

CROP MANAGEMENT

Winter wheat is beginning to ripen and spring wheat is still a few weeks away. Wheat maturation is a good reminder that late summer seeding of ryegrass into fallow ground or wheat stubble can be a successful method of perennial ryegrass stand establishment. An application of Roundup is a good management practice prior to seeding ryegrass into wheat stubble. This is especially important for perennial grass (e.g. Quackgrass) and perennial broadleaf weeds. When should ryegrass be seeded in the late summer? The data in Table 2 are results from research conducted at the Magnusson Research Farm near Roseau, MN.

Table 2: Arctic Green perennial ryegrass seeded at various dates in tilled and no-till ground in 2008 and a two year average (2008 & 2009) at the Magnusson Research Farm near Roseau, MN.

	-----2009-----				-----2008 & 2009^-----	
	Tilled Ground*		Wheat Stubble**		Average of Tilled & No-till	
Seeding	Yield	Dry Matter	Yield	Dry Matter	Yield	Dry Matter
Date	(#/acre)	(tons/acre)	(#/acre)	(tons/acre)	(#/acre)	(tons/acre)
8/25/08	736	1.81	1405	2.96	1314	2.70
9/1/08	599	1.61	1135	2.71	1281	2.76
9/9/08	545	1.07	714	2.05	953	2.00
9/17/08	173	0.71	466	1.27	665	1.43
9/22/08	67	0.92	377	1.08	365	0.95
LSD @5%	444	1.10	444	1.10	320	0.78

^ Averages of tilled and no-till seeding of perennial ryegrass seeded in 2007 and 2008 (harvested in 2008 and 2009). The seeding dates for 2007 are similar to those of 2008 (harvested in 2009).

* Perennial ryegrass seeded into bare ground without a cover

** Perennial ryegrass seeded into wheat stubble

Several conclusions can be gleaned from the data in Table 2.

- In 2009, ryegrass dry matter and seed yields were better if seeded into stubble than bare ground
- For ryegrass seed yields over 1,000 pounds, ryegrass should be seeded in late August or the first week of September
- Dry matter and seed yields declines each week as seeding date is delayed in September
- Data would suggest if ryegrass seeding is delayed until mid-September a yield penalty of over potential is 50% can be expected compared to late August seeding

Straw Management

Wheat straw management is one of the critical steps for a successful ryegrass seed crop. It's important to get a **uniform spread of the wheat straw and chaff**. Chaff spreaders will spread hulls and other "fines". A uniform spread of the wheat straw is the first step in successful ryegrass stand establishment for both spring and fall seeded ryegrass. More on ryegrass stand establishment into wheat stubble in next week's newsletter.

The next newsletter will be released August 5, 2014.