MINNESOTA TURF SEED COUNCIL
NEWSLETTER
June 2, 2015

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2015 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 calendar year to the current date. Thus far in 2015, accumulated GDD are 1,145 (adjusted GDD = 873) as of May 31 (Table1). Projected forecast for the next ten days suggests a continuation of above normal temperatures. The current ten day forecast projects an accumulation of 329 GDD or 32.9/day. Long term average GDD for the first week of June is 182 GDD or 26/day. With the recent rainfall and above normal temperatures perennial ryegrass and other plants are in a rapid growth phase.

Table 1. Growing degree days (GDD) for March 2010 to May 2015 near Roseau MN.

Year	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2015 vs. 14**
March	119	0	0	304	7	137	+119
April	367	159	80	370	278	476	+208
May	659	654	640	726	639	707	+5
June		964	975	979	898	911	
Total	1,145^	1,777	1,695	2,379	1,822	2,231	
June 1-10*							

* Forecasted GDD at Roseau for the next 10 days.
^ Total GDD for 2015.
^Adjusted GDD (-272 GDD) due to extensive ryegrass leaf desiccation in April 2015 = **873**

GENERAL CROP CONDITION

Perennial ryegrass fields in 2015 have shown a high degree of stand variability. This variability in ryegrass stand has been observed in both spring and late summer seeding. The following are observations in ryegrass stand winter survival:

1) The winter of 2014/2015 put a high degree of environmental pressure on ryegrass stands. Ryegrass went into the fall in relatively dry soil with November one of coldest in recent memory, with no snow cover. December brought limited snow cover and a January thaw melted most of this snow. A warm snap in mid-March melted the snow cover in a few days and with a couple weeks of above normal temps the ryegrass plants began to break dormancy. The first 10 days of April had low temperatures in the teen and low 20's. The remainder of April we had 6 mornings with low temp in the high 20's and in May followed with 5 days with low temps in the high 20's.
2) Spring seeded ryegrass, although variable, generally has better stands than late summer seeding with a cover crop or no cover. The U of MN conducts a ryegrass winter hardiness trial seeded each fall into summer fallow ground without a cover crop, to maximize environmental pressure, each year in St. Paul and Roseau. All ryegrass entries in Roseau winter hardiness trial had a high degree winterkill (see newsletter dated 5/19).
3) The U of MN conducts a ryegrass variety trial in Roseau every year. In years of high degree of environmental pressure, some ryegrass varieties are better adapted to the stresses of cold temperatures (Table 2). Percent ryegrass stand ranged from 0 to 89%.

4) Early applications of P & K improves the ability of ryegrass to survive environmental stresses. Perennial ryegrass was better able to survive the winter from P & K applied after wheat harvest compared to the mid-October timings. This trial will be one of the stops in the annual grass seed field day on June 24th.

The bottom line, the fall of 2014 and winter of 2015 was one of those years with a high degree of environmental pressure on ryegrass winter survivability. In years with minimal environmental pressures, ryegrass winter survivability is not an issue as most all plants survive regardless of management practice. However, in years with high environmental pressure, management practices will make a difference in ryegrass winter survivability. Spring seeding, variety selection and timing of fall fertility are management practices which can influence the ability of ryegrass to survive the winter.

Table 2. Perennial ryegrass variety trial, U of MN Magnusson Research Farm

2014 Perennial ryegrass Seed Production Variety trial				
Roseau,Mn F6				
Planted 6/4 /2014				
Samson wheat planted with ryegrass--Hege drill				
	Variety	seed lot	%stand 5/23/2015	
U of M	Ragnar II	4010	45	
U of M	Arctic Green	3997	71	
check	Brightstar SLT	3977	19	
check	NK-200	3917	81	
U of M	Royal Green	3998	63	
U of M	MSPxA.Green/R.Green	3999	58	
U of M	Spreader III	3791	48	
U of M	Green Emperor(MSP)	3976	69	
Rose-Agri	TetraGain	4008	0	
U of M	Forageur	3984	89	
Check	Remington	4009	1	
McCarthy	Provocative	3992	6	
	LSD @5% level		19	

CROP MANAGEMENT

Isolation strips for grass seed crops

Now is the time to cut isolation strips in certified grass seed crops. If you have questions or concerns please talk to your grass seed fieldman, seed conditioner or Kris with MCIA. When cutting isolation strips in ryegrass, consideration should be given to trimming field ditches and low areas of the fields. These are prime areas for weed growth and a mower will keep these weeds out of the swaths at harvest time.

PEST MANAGEMENT

In previous years, selected ryegrass fields have rouged for off type plants. It is important to control weeds in the field and not run these plants through the combine. Roundup through a wand (spot spraying), or through a rope wick have been successfully used to control off type plants in ryegrass.

Next week's newsletter will be released on June 9, 2015.