NORTHERN MINNESOTA GRASS SEED GROWERS
NEWSLETTER
May 16, 2011

RYEGRASS GROWING DEGREE DAYS (GDD)

Ryegrass GDD will be tracked for the 2011 growing season with comparisons to the last four years. A base temp of 32 degrees F will be used for ryegrass (T-Base = 32 F).

Table 1. Growing degree days (GDD) for March, April and May 2006 - 2011 near Roseau MN.

Year	**2011**	**2010**	**2009**	**2008**	**2007**	**2011 vs. 10**
March	7	137	30	6	90	-130
April	278	476	247	202	322	-198
May		707	515	501	746	
May 1-15	258					
Total	543	1,320	792	709	1,158	

The 2011 spring is tracking close to the 2009 and 2008 seasons. The 08 and 09 seasons were on the cool side compared to the 07 and 2010 growing seasons which were early and warm. Even though spring has been slow to arrive, we are beginning to see signs of spring. The dandelions are in full bloom, the popular trees are showing shades of green which means leaves soon and the MN fishing opener was over the weekend. These signs point to fact that spring may finally have sprung.

Short term weather forecast indicates sunny and warm with temps in the 70's. This is a welcome change compared to what we have experienced thus far this spring. Drills will be rolling in most of the area, seeding small grains and oil seed crops. We will see a flurry of activity to get the crops planted when the soil condition allow.

GENERAL CROP CONDITION

Ryegrass

Ryegrass fields, for the most part look great! Last year was a great year for wheat and some areas of the ryegrass fields that didn't have the wheat residue spread uniformly are showing some signs of smothering. Time will tell how the ryegrass plants will grow through this dead plant material from last fall and winter. The projected warm weather will have the ryegrass crop moving from the vegetative to early tillering stage of growth.

Bluegrass

Bluegrass fields are growing well and will soon beginning show signs of "stretching out" and will soon begin a rapid elongation growth phase. It is important to get weed control operations completed prior to this elongation and jointing stage.

PEST MANAGEMENT

Ryegrass

Winter annuals are bolting and will soon set seed. If broadleaf herbicides were not applied last fall, now would be the time to scout ryegrass fields to determine the infestation level of winter annuals, perennial broadleaf weeds (dock, dandelion, clovers) and cool season broadleaf weeds (wild mustard, wild buckwheat, common lambsquarters, smartweeds). Weeds grow fast, especially with the short term

forecast for day time highs in the high 60's to low 70's. Regular scouting is essential to determine the best weed control program for your situation.

In 2010, volunteer spring wheat was a problem in many ryegrass fields. Thus far in 2011, isolated cases of volunteer wheat have been observed in ryegrass fields. The U of MN has a ryegrass date of planting trial at the Magnusson research farm which suggests if wheat was seeded prior to the first week in September, winter survival of volunteer wheat is limited.

CROP MANAGEMENT

Ryegrass

When should nitrogen be applied in ryegrass? The ryegrass plant goes through three distinct phases in uptake and utilization of nitrogen from the soil.

- Phase 1 - Slow nitrogen uptake
- Phase 2 - Rapid nitrogen uptake
- Phase 3 - Nitrogen redistribution, slow or no uptake (movement within the plant)

Phase 1 takes place in the fall and early spring and corresponds to ryegrass plants in the vegetative to tillering stage. Research in Oregon indicates less than 20% of the above ground biomass is accumulated prior to tillering. In Minnesota conditions, ryegrass will be in Phase 1 from vegetative to tillering (up to 700 GDD).

Phase 2 is the time for rapid nitrogen uptake in ryegrass. This corresponds to ryegrass in the jointing to early heading stage. Research from Oregon indicates ryegrass plants can take up 2 to 4 pounds of nitrogen/day during Phase 2. This rapid uptake of nitrogen is completed at head emergence which is 6 weeks or more prior to harvest. It is critical to have nitrogen in the root zone during this period of rapid nitrogen uptake. In Minnesota conditions ryegrass will be in Phase 2 from jointing to heading (700 to 1,250 GDD)

Phase 3 occurs during heading to mature seed set (> 1300 GDD). The majority of the nitrogen has been taken up by the ryegrass plant and nitrogen needs are redistributed in the plant from lower leaves and tillers to the upper parts of the plant. Nitrogen applied at this time is of limited utility for ryegrass seed yield. The exception may be foliar feeding and will be a topic discussed in a future newsletter.

Thus far in 2011, we have accumulated 543 GDD. Now is the time to schedule additional nitrogen applications in ryegrass. It is important to get this nitrogen into the root zone. If we get the predicted warm weather (25 GDD/day) we will accumulate approximately 700 GDD for the year by this weekend.

The next Grass Seed Newsletter will be released on May 23, 2011.