

**MINNESOTA TURF SEED GROWERS NEWSLETTER**  
**April 27, 2010**

**RYEGRASS GROWING DEGREE DAYS (GDD)**

Ryegrass GDD will be tracked for the 2010 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). The GDD information presented in Table 1 is for the month of April in 2006 - 2009 and April 1-25 in 2010.

Table 1. Growing degree days (GDD) for April of 2006 - 2009 and April 1-25 in 2010 at Roseau MN.

<b>Year</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2010 vs. 09</b>
March	137	30	6	90	53	+107
April		247	202	322	529	
April 1-25	380					
Total	517	277	208	412	582	

The 2010 season continues to be warm. Field work is progressing well. Poplar trees have the “green look” to them and the dandelions in the yard and next to buildings are in full flower. It appears the 2010 season will accumulate more GDD by the end of April than 2006 which was our last warm spring. Plant growth and development is driven by temperature and plants can grow rapidly. Field scouting for weeds will be time well spent as many weeds are growing well and winter annuals are beginning to bolt and flower.

Last week we averaged 20.1 GDD/day and have accumulated 380 GDD in the month of April. The short term weather forecast is for continued warm and dry conditions until mid-week which will bring a chance for rain. A couple days of rain would be most welcome!

**GENERAL CROP CONDITION**

Ryegrass

Ryegrass fields continue to look great! Ryegrass plants made it through the winter very well and the warm weather has the ryegrass crop in the vegetative to early tillering stage of growth.

Bluegrass

Bluegrass fields are beginning to green up. Bluegrass plants 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

Spring wheat used as a cover crop to catch snow has made it through the winter. In many fields it looks like the wheat was seeded this spring. It may be too early to spray Assure II in tolerant ryegrass as the foxtail species have yet to germinate. In non-tolerant ryegrass varieties, volunteer wheat can present a problem. One potential solution is Callisto. Callisto at 3 oz/A with crop oil (1 gallon/100 gallons spray solution) is effective on broadleaf weeds and volunteer wheat. Plants treated with Callisto turn yellow to a bleached white in color. Several area fields have been sprayed with Callisto and the wheat has a bleached yellow color. Additional time is needed to fully assess the level of control.

Winter annuals (cockle/catchfly, shepardspurse and frenchweed are soon to bolt and flower. Some of the cool season broadleaves (mustard, common Lambsquarters, smartweed, buckwheat) have emerged. However, pigweed and Canada thistle have yet to emerge. Ryegrass fields sprayed last fall generally have good control of winter annual weed. Ryegrass fields not sprayed last fall should be sprayed soon to control these weeds and prevent seed production. This will require a second application later in the season to control weeds that have not emerged or that emerge after a rainfall event. 2, 4-D at 0.5 to 1 pint of 2, 4-D will control these winter annual weeds.

### Bluegrass

If Beacon is to be used for weed control in bluegrass it should be applied prior to joining. In addition, previous research suggests that in dry conditions Beacon can cause injury to the bluegrass crop. If Beacon is planned this year, use caution as the 2010 season has been one of the driest springs on record. Beacon use rate is 0.38 oz/A, and should be used with a non-ionic surfactant.

## **CROP MANAGEMENT**

### Ryegrass

With the dry weather a common question is 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 2010, we have accumulated over 500 GDD. With rain in the forecast it would be ideal to apply nitrogen prior to a rainfall event to move the nitrogen into the root zone. If we accumulate 20 GDD/day we will be at 640 GDD for the year by the weekend.

The next edition of this newsletter will be released on May 4, 2010.