

MINNESOTA TURF SEED GROWERS NEWSLETTER
April 20, 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 the Table 1 is for the month of April in 2006 – 2009 and April 1-18 in 2010.

Table 1. Growing degree days (GDD) for April of 2006 – 2009 and April 1-18 in 2010 at Roseau MN.

| Year | 2010 | 2009 | 2008 | 2007 | 2006 | 2010 vs. 09 |
|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|
| March | 137 | 30 | 6 | 90 | 53 | +107 |
| April | | 247 | 202 | 322 | 529 | |
| April 1-18 | 239 | | | | | |
| Total | 376 | 277 | 208 | 412 | 582 | |

The 2010 season is off to a warm start. Last year the ice was still on Lake of the Woods for the fishing opener in mid-May. This year the ice is already off the lake!

The 2010 season accumulated 137 GDD in March which was more GDD than any March since 2006. Further, the 2010 season has accumulated more GDD in March and the first 18 days of April than March and the entire month of April of 2008 & 2009.

GENERAL CROP CONDITION

Ryegrass

Ryegrass fields look great! The ryegrass plants made it through the winter very well and the warm weather has the ryegrass crop “greening up” and in the vegetative stage of growth.

Bluegrass

Bluegrass fields are beginning to green up. The bluegrass crop could use a rain as we have not had measureable precipitation in March and thus far in April. 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

Mustard, common Lambsquarters and other cool season broadleaf weeds are beginning to emerge. Wild oats and volunteer wheat have emerged and are growing well. Foxtail species are still dormant. Many of the winter annuals are off to a fast start and are beginning to bolt. Canada thistle has yet to emerge. This presents a dilemma for weed control in ryegrass. If we wait too long, the winter annuals will be in full flower and produce seed, but if we spray too soon the thistle and other warm weed species will not be controlled as they have yet to emerge. It may be advantageous to consider two applications for broadleaf weed control. The first timing will control winter annuals and cool season broadleaf weeds and the second timing for Canada thistle and warm season broadleaf weeds.

Spring wheat that was used as a cover crop in the establishment of ryegrass has made it through the winter. It appears that wheat and ryegrass seeded in the last week of August and September of 2009 have a moderate to heavy infestation of volunteer wheat. If the ryegrass is the Assure tolerant variety

this wheat can be controlled with Assure II. In non-Assure tolerant varieties this volunteer wheat can present a problem. Due to the early, dry spring the most likely spray treatment is Callisto. Callisto at 3 oz/A with crop oil (1 gallon/100 gallons spray solution) has been effective in previous research. The other option is an application of Roundup through a rope wick when the wheat is jointing.

Dicamba and 2, 4-D are the workhorses for broadleaf weed control in ryegrass. Product rates range from 0.5 to 1 pint depending upon weed size and species. Ryegrass is very tolerant of these two products. However, small plants generally are easier to control than large plants. Weeds grow fast and regular scouting is essential to determine the best weed control program for your situation.

Bluegrass

If Beacon is to be used for weed control in bluegrass it should be applied prior to jointing. Beacon use rate is 0.38 oz/A, and should be used with a non-ionic surfactant. Previous research with Beacon in bluegrass indicates that bluegrass injury may occur if applications are made during the jointing stage in bluegrass. The jointing stage in bluegrass corresponds to the time when the variety 'Park' gets the uneven (ragged) look.

CROP MANAGEMENT

If certified grass seed is raised, be sure to schedule a field inspection and cut isolation strips around grass seed fields. Contact your fieldman or the Minnesota Crop Improvement (MCIA) for details.

Ryegrass

How long can we wait to make an application of nitrogen fertilizer in ryegrass? The recent dry weather has many producers asking this question. If nitrogen is left on the soil surface without rain, recent research from Montana indicates nitrogen losses in two weeks can be > 25%. Ideally, a top dress application of Urea applied to ryegrass should have a 0.25 to 0.5 inch of rainfall to move this fertilizer into the root zone. Previous research indicates that if a base rate (30 to 60 pounds of nitrogen) was applied in the fall and spring applications of fertilizer is moved into the root zone, spring fertilizer can be applied up to the jointing stage in ryegrass without a sacrifice in seed yield. Based on prior years GDD information, ryegrass plants will be in the 2 to 3 node stage after the accumulation of approximately 1,000 GDD. Year to date we have accumulated 376 GDD. If we average 20 GDD/day, we have approximately a 30 day window to apply nitrogen in ryegrass. More on this next week.

Bluegrass

In the last three years, mildew infestations have corresponded to the accumulation of approximately 650 GDD. Thus far in 2010, we have accumulated 376 GDD. When will we begin to see mildew in bluegrass? Field scouting will determine the actual incidence of pest outbreaks. However, if the GDD model acts like previous years we should begin to see mildew after the accumulation of an additional 274 GDD.

How many days will that take? In 2010, the first 18 days of April averaged 20.8 GDD/day. In April of 2009 we had accumulated 8.2 GDD/day. If we assume 274 additional GDD for mildew to be present and we use a high of 20.8 GDD/day that will be in 13 days and if we use a low of 8.2 GDD/day that will be 33 days. Weather conditions in the next few weeks will determine the incidence and severity of a potential mildew outbreak in bluegrass.

The next edition of this newsletter will be released on April 27, 2010.