

## Late Summer Cutting Management of Alfalfa

Challenging alfalfa harvesting conditions early this summer have meant that many farmers are off schedule for harvesting alfalfa. This raises the question of best management of alfalfa harvest as the end of summer approaches. Farmers have to balance the need for tonnage, forage quality and winter survival.

If plants do not have sufficient root reserves going into winter they will be susceptible to winter kill. Alfalfa must either be cut early enough that it can re-grow and then replenish root reserves or late enough that the alfalfa does not re-grow and use any root reserves.

Therefore, UW-Extension Agronomists have made the recommendation of a “no-cut” window from September 1 to killing frost for Wisconsin. However, recent research in Quebec has helped define this window by indicating that alfalfa needs 500 growing degree days (GDD) after the last cutting to re-grow and replenish reserves for good winter survival. So we can cut in the fall as late as the date where 500 GDD will still accumulate without hurting the stand. This GDD is calculated as the average of the daily minimum and maximum above 41 degrees F until a killing frost (25 degrees F).

Climatic data looking at the historical averages over 30 years from sites north and south of Polk County give us an idea of when historically hit these GDD marks. Cutting at Rhinelander on September 1<sup>st</sup> would result in an 85% chance for stand survival. On Sept. 8<sup>th</sup>, the survival probability falls to roughly 30%. Data for Marshfield suggests the survival probability on Sept. 1<sup>st</sup> is 95% and on Sept. 8<sup>th</sup> is 72% and on Sept. 15<sup>th</sup> is 35%.

There is a significant difference between the two sites. While Rhinelander probably gets fewer GDD than Polk County, our GDDs will probably be closer to Rhinelander than they will Marshfield. The recommendation has always been to not cut after September 1<sup>st</sup>, and according to the new research, sticking to this guidelines appears to make sense.

If you are behind and wish to delay harvest one week, there will be a risk for winter kill (survival according to historical data will be between 30% and 72%) depending on if our fall more closely follows the Rhinelander or Marshfield data set. Cutting on Sept. 15<sup>th</sup> will most likely lead to serious losses. A late cutting can be taken after the killing frost if forage is greatly needed, although it is beneficial to leave the residue on the field to trap snow for insulation over the winter.

Remember that forage quality of alfalfa changes little during September, so harvesting vs. delaying should be based on likelihood of winter injury or survival if the stand is to be kept. Producers that are short on forage and need the fourth cutting should consider a risk management approach where you take chances on the older fields, and protect the younger by not cutting after Sept. 1