



## **When to Take the Last Alfalfa Cutting**

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It's almost September and time to decide when or if to take the last cutting of alfalfa. Presently, all of Manitoba is in what's commonly known as the Critical Harvest Period (CHP) - 3rd week of August to end of September - when it's not recommended to cut alfalfa. During this period, the alfalfa is in the process of storing sugars in the roots for winter survival and to ensure enough energy for a good start in the spring. Harvesting alfalfa in the last 4-6 weeks of the growing period has been associated with reduced yields and stand longevity. Typically, alfalfa requires 6 weeks or 450 Growing Degree Days (GDD) to accumulate root reserves, initiate crown buds and develop cold hardiness necessary to withstand normal winter temperatures.

For Manitoba, the critical harvest periods have been established based on averages that indicate after this date there is the likelihood we will accumulate 450 Growing Degree Days (GDD) before a killing frost. A killing frost for alfalfa is -4 to -5 C but as we approach later in the season and the alfalfa is subject to cooler temperatures and shorter days, these factors increase alfalfa ability to withstand even lower temperatures. At this point the alfalfa has stopped growing and has started to harden off.

If less than 200 GDD are expected after the alfalfa has been cut, alfalfa will not grow to any significant degree. This can be useful if your alfalfa is in full bloom by the middle of September. Taking a final cut at this stage would normally be considered safe. For help determining GDD for your area click on [Weather](#) or go to the Mb Ag Weather site.

Forage growers should assess their needs going into harvest to determine how big of a risk they are willing to take versus what they will achieve with a later cut.

Start by considering if there's enough forage already in storage to get the cows through the winter. Then take a look at your fields and decide if there's enough alfalfa in the field to make it worth the time to harvest. And, if so, what are the risks to next year's crop?

From experience, we know alfalfa cut in late September or early October can survive given the right conditions, although spring growth may be a little slower. Below are some things to consider when deciding to take an alfalfa harvest during the "critical period". Assessing these risks can be helpful in making the "best" decision:

**Harvest frequency:** Alfalfa harvest schedules which do not allow the alfalfa plant to flower once during the season predispose the plant to winter injury. Allow at least six weeks between your previous cutting and the cut that occurs during winterization. This is especially critical if the field gets cut three or more times this year.

**Age of stand:** Older alfalfa stands are more likely to winter kill or suffer winter injury following a fall harvest than younger alfalfa stands. Avoid old, thinning fields unless you plan to rotate that field to a different crop next year. Young, healthy alfalfa fields containing varieties with good winter survival ratings are most likely to perform well even after cutting during winterization.

**Soil fertility:** Adequate soil fertility minimizes the risk of fall harvesting by allowing alfalfa plants to develop properly and be healthier. Select fields that have adequate P and K to help ensure winter hardiness.

**Soil drainage:** Alfalfa on well-drained soils is less likely to suffer winter injury than alfalfa on poorly-drained soils.

**Fall cutting height:** Leaving six to eight inches of stubble when taking a fall harvest will reduce the risk of winter injury. For most fields this isn't practical and producers leave strips of standing alfalfa to trap snow. If you are leaving strips be sure that they are close enough together to do an adequate job and that the alfalfa plants in the strips will actually stand and trap snow.

If you cut after the CHP, prior to the first killing frost, it has the potential to lower root reserves and impact the sugars and carbohydrates that are stored in the plant, sending it into winter with lower carbohydrate storage than what's needed to get through the winter. As spring approaches, plants are weak due to low energy levels, making it difficult to begin vigorous growth. Low carbohydrates storage is generally associated with poor overwintering. These sugars also help keep the plant from freezing. Plants that have adequately prepared for winter can withstand temperatures down to about minus12°C.

The type of winter you experience is another risk factor. Snow cover provides great insulation, so it may be -20°C above the snow, but the soil surface and roots are still well protected. Open fields without snow cover, or parts of the country that don't get snow cover, but see fluctuations in temperature in the middle of winter and spring, can be very damaging to plants. When taking a final cut, leave enough stubble to trap 15-20 cm, of snow. This can be provided by leaving strips of standing alfalfa to trap snow. Snow cover is necessary to insulate the crowns of alfalfa during the winter.

Winters like what we experienced in 2016-17 are hard to predict. Warm temperatures and rain in the Eastern and Central regions caused significant amounts of damage to the alfalfa crop. In some cases, no matter what you did, you would have experienced loss of stand. In these cases, it's always best to have a plan in place where you can make up for shortfalls in forage production if there is a crop failure.