



## **Time to Evaluate Alfalfa for Winter Injury**

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Recently, Winter Cereals Canada (WCC) released a report on the condition of the winter wheat crop in Manitoba and Saskatchewan. Now you may be asking what winter wheat has to do with my alfalfa crop, well both crops have to survive a Manitoba winter. According to the report, areas in Central and Eastern Manitoba are seeing damage to the crop. Wheat tends to be more tolerant to lower soil temperatures than alfalfa except as we move closer to spring, but according to the [report](#), WCC blames the damage on two thaws occurring in January and in February, leaving pools of water in the fields that then froze, killing the plants in the low lying areas.

By now your alfalfa has started to break dormancy and is beginning to grow. Now is the time to evaluate the health of those stands and determine if there is any winter injury. We have gone thru a strange winter with two thaws, rain in some areas and extended periods of cold weather. Any of these factors can have and do have a detrimental effect on alfalfa.

Generally temperatures of -12 C measured at a 2 inch depth can begin to damage alfalfa crowns. Prolonged exposure can kill the plant. Snow cover is an important component of protecting an alfalfa plant from sub-zero temperatures since even a cover of 4 inches of snow can provide 10 to 15 degrees of protection. Once again, the concern is for those areas that experienced periods of subzero temperatures without a 4 inch or greater snow cover. Some areas of the province had soil temperatures at the 2-inch depth dipping close to or below -12 C through the coldest days this winter. See [Be Alert to the Risk of Alfalfa Winter Injury](#) in our March e-Bulletin.

An alfalfa stand health evaluation and winter injury assessment needs to be done by getting out into the field and doing a combination of stand counts (plants/sq ft) and digging up some plant roots. If this evaluation is done when there is 3-4 inches of growth, you can also count the stems per plant. This is very useful as healthy plants produce more stem per plant thereby compensating for fewer plants per sq ft. When counting plant/sq ft, ideally you are looking at 5 or more plants/sq ft in a 3-year or older stand. As for stems/sq ft, target 50 plus so that you have a chance of reaching at least a 90 % yield potential. For more information on plant stand and stem counts click on [Alfalfa Stand Assessment](#).

After you have counted the plants/sq ft, you need to dig up some of the plants and examine the crowns and roots, by splitting the crowns/roots and examining the inside. The inside should be creamy white in colour; if it is yellowish brown to chocolate brown in colour the tissue is dead or dying. If more than 50% of the roots you examine show these symptoms, your stand and yield may be compromised.

There are a couple of excellent videos that go thru some of the steps necessary to make an informed evaluation of your alfalfa stand. View [Alfalfa Evaluation](#) or [Assessing Winterkill In Alfalfa](#) or go to the MFGA website at [MFGA Forage](#) for more information.