

Green Gold Report – May11, 2015 – EASTERN

Here is the first release for the Green Gold program. This year we will again be reporting from various areas of the Province (Eastern, Central, Interlake, and Western).

SITE	RFV NIR	RFV PEAQ	Height	CP
Il de Chene				
St Pierre				
Grunthal	370	287	10	30
Kleefeld south	312	287	10	26
Kleefeld east				
Steinbach	346	287	10	34
Giroux	354	287	10	25
NewBothwell	288	287	10	26
AVERAGE	345.5	287	10	28.75

Fields sampled on Monday in the South-east were for the most part 10 inches tall. 3 of the fields that we will be testing were only in the 5-7 range which is too short to give a good representative sample to use with the PEAQ system for estimating alfalfa quality and therefore weren't sampled. The return of cool weather this past week has slowed the alfalfa's growth. Presently we have accumulated about 90 GDD's (growing degree days) base 5C. Although this is slightly above normal what we have seen is that from the 7th of May to the 11th we have accumulated no additional GDD which has slowed or stopped the alfalfas growth. Some fields did show signs of frost damage but this was very minimal and should have no affect on yield.

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“Light Frost” Damage

As you can see in the photos there was some very light frost damage in some fields in the Eastern area of the province. Overnight temperatures from May 8th to 10th did reach -3.5 C. The extent of frost damage to the alfalfa will depend on the severity of the freezing. Early spring alfalfa growth can be held in suspension for a period of time. Several nights of cold snap or “refrigerator” like temperatures are tolerable to 1st crop alfalfa. The cold tolerance compounds that protect the alfalfa roots and shoots during winter months remain present in stems, leaves and terminal bud. However, these compounds begin to dilute as alfalfa grows into first crop maturity.

Temperatures in the plant canopy level are usually “layered” and higher than reported “air” temperatures. Soil temperatures, slope, wind and the microclimate within a field can all have an effect. In mild cases, leaves at the tops of the plants become wilted and discoloured, but plants should completely recover. If the “shepherd’s hook” straightens, normal growth resumes. Frosts as low as -3°C can freeze leaf margins, resulting in white spots on the leaves (see photo) but not damage stems or growing points.



In more severe cases, alfalfa stems freeze to various degrees and growing points are destroyed. Growth of alfalfa is from the tip of the stem where the growing point is located within a dense cluster of unfolded leaves. Temperatures below -4°C for 4 hours or more will damage growing points and stems will die. However, it would take a lot of hard frost to kill an entire alfalfa crown and this very rarely occurs.

Do I Take a Final Cut?

You may have noticed that 3 fields weren’t sampled this week. This is because they were short (5-7 inches). Looking at them they were on different soil types, spread all over the SE and all were young fields. The only common denominator was that they had had a final cut taken in the fall. In the photo below is one of the fields where the final cut was left and stubble is present in the field. Sometimes producers do notice that fields that aren’t cut late in the fall do tend to green up sooner or get a jump on those where a cut is taken after the critical harvest period. Cutting during that CHP can reduce root reserves that the plant draws on in the spring to initiate new growth until it has enough leaf material to manufacture its own carbohydrates thru photosynthesis. Even if you observe the CHP some stress from late fall cutting still exists and, in winters that are stressful (such as last year with some periods of low snow cover), the stress can show up in the spring. I asked Dan Undersander his opinion and he does advise farmers in Wisconsin to take the late fall cutting because yield is now reasonable but to recognize that about 20% of the time the stand will be hurt next spring.

