

The effect of rain on windrowed pasture

A nutrient loss in cut pasture material following rain occurs because much of the nutrition of the plant is water soluble and is removed by leaching (washing out). Most of the nutrients leached out are those that are highly digestible by the animal and include readily available carbohydrates and soluble nitrogen, minerals, and lipids. This translates to a reduction in digestibility and ME on your Feed Test report. About one-half of the dry matter leached by rain is soluble carbohydrates. Contrary to popular belief, rain tends not to wash proteins out. This is due to the fact that most plant proteins are stored in the leaf tissue, not the stem, and the mower is usually set low enough to just cut the stalk. If the pasture has been cut and windrowed for a long period of time, heavy rains can shatter the leaf and reduce the protein content.

Rain that falls on windrowed pasture results in both yield and quality losses. This obviously affects the value of the crop as an animal feed and as a saleable product.

The amount of damage caused by rain is related to how soon after windrowing the rain hits. Rain that soaks the windrow after it is nearly dry causes much more damage than a rain that hits immediately after the pasture is cut.

Nevertheless, pasture that has been cut continues wilting (breaking down soluble carbohydrates by enzymes) and can reduce dry matter yield by 2% per hour until the plant reaches about 60% moisture. When this cut pasture is subsequently hit by rain, respiration can be prolonged increasing the dry matter losses and increasing the chances of mould growth.

Reduced WSC also reduces the amount of energy available for the fermentation bacteria to use during silage fermentation. In such instances, you might consider use of silage additives to provide fermentable substrate to ensure your grass turns into good quality silage. Additives such as Hay Guard® or Silo Guard® can also be used to bale product that falls slightly outside the optimal dry matter allowable. This will help prevent mould and yeast formation, reduce dry matter losses and heating and also increase the palatability.

If you use a contractor to prepare your hay or silage, consider using a contractor with a mower conditioner, or employ a contractor that can tedder the cut pasture to ensure it is wilted down to the correct dry matter as soon as possible.



Pasture being cut for silage through a mower conditioner at Tahara. Conditioning pasture is a time saving process, allowing wilting to occur quicker and helping avoid weather delays in baling. This pasture was cut, raked, baled and wrapped within 3 days.

Remember, reducing the time cut pasture is laying in the paddock will;

- a. Reduce nutrient losses
- b. Reduce risk of weather events damaging the product
- c. Promote paddock pasture re-growth

The pasture only needs to sit on the ground long enough to wilt it down to the correct dry matter for baling (longer for hay, shorter for silage). Consider (if you can) using techniques to speed the wilting process up to ensure the quality of your final product remains high. For more information, please contact Dynamic AG on (03) 5571 1760.

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