



## Why Make Silage?

For those wags who believe their calling in life is to liven up dairy farmer meetings, here's a line that never fails: "Making hay in South Western Victoria (or areas of similar climatic conditions) is about bad management – it should have been silage!"

Naively, I've made the statement myself, never intending to cause the furore it did, but for those who have the above qualification on their "mission statement", I can certainly guarantee the response. Following on from last month's article, "What Makes Good Silage", we need to appreciate, why we make silage.

There are two good reasons for making silage; both have substantial impacts on farm profit. The first, and fairly obvious, is to provide a quality feed to keep cows milking over summer. The second, to maximise dry matter harvested per Ha.

Firstly, let's look at a fairly common summer ration. Say 2 kgs DM (dry matter) pasture, 3 kgs DM turnip/rape crop, 5 kgs of grain plus all the cows can eat of either pasture hay or silage.

This ration, with pasture hay as the hand fed forage part, would allow an intake of, based on NDF of average pasture hay, about 7 kgs of pasture hay. This would give us a total intake of 17 kgs DM (based on a 600 kg Holstein). This ration would support a 21 litre/cow production level. It would be a low energy, high fibre and low crude protein ration (ME 11.16, NDF 40 & CP 13.42).

Take the same ration, and replace hay with unrestricted silage of average quality, and silage intake would be 10 kgs DM/cow due to just fibre (NDF) alone. The higher energy and crude protein of silage would produce a ration profile of: ME 11.5, NDF 35 & CP 17.85. Bear in mind a goal ration would be ME 11.5, NDF 32% & CP 17.5. Obviously, the silage ration is very close to our goal for optimum intake/production, energy and protein. This ration would support a milk production of 28 litres.

The choice between making silage or hay is quite clear – 7 litres/cow/day. This difference in milk production is due mostly to lower NDF (fibre) of silage because it was cut probably a month before we are able to make hay. Also, being cut prior to maturity the pasture is both higher in energy and crude protein, making it an all round far higher quality feed.

On an average 200 cow herd this equates to approximately (based on 28c/litre) \$350 additional profit per day over the herd. These figures also take into account the cost difference between silage and hay making.

The second argument for silage is lifting dry matter harvested per Ha. The average dry matter harvested (this is the total of pasture harvested either by cows grazing or by machine in silage or hay) for South Western Victoria is around 4 tonnes DM/Ha.

There are a growing number of dairies harvesting up to 8 tonne DM/Ha. The bulk of this increase is due to harvest management during spring (cows & machine). When we consider some 60% of pasture growth occurs in less than 20% of the year, management during spring is critical to total tonnes harvested. We value pasture at around \$150/tonne DM. Half this figure is capital cost of the land we grow it on. This figure was formulated when land was around \$3000/acre – it needs updating considerably!

No need to be Einstein to realise the farm harvesting 8 tonne/ha has pasture which not just cost considerably less to produce, but far more of it. It becomes an “all or none” situation. So, how does silage over hay help to achieve this increased dry matter harvested.

I have stated previously that silage is only a tool to control pasture quality. If we approach silage making with this attitude we will achieve the goal of both quality and quantity. As soon as pasture is beginning to ‘get in front of cows’, that is, growing faster than they can eat it, then cut it for silage.

This will ensure high quality (energy/fibre/protein) silage, will have harvested pasture before heading points can cause maturity and decrease both regrowth potential and digestibility. The key is keeping pasture actively growing. Cut within a couple of days of perfect grazing quality (ME 12, NDF 40% or less & CP 20%), immediately apply urea under reasonable moisture conditions, and it will be back ready to graze in 18 days.

The farms achieving 8 tonne/ha usually do not “shut up” paddocks for silage, but simply cut paddocks in front of the cows as described above. They are usually ‘doing’ silage daily.

Inoculating silage will help to achieve both these goals, quality – milk producing silage, and high yields per Ha. Ensure you choose an inoculant containing a minimum of 200,000 CFU (bacteria number) for rapid pH drop, and enzymes to provide adequate sugars for bacteria to convert to copious quantities of lactic acid to enhance the rapid pH drop – the key to retaining the quality of pasture at cutting.