



Summer (February) 2008, 2pp.

## RAMBLING AROUND THE FARM – FEED COSTS

**By Andy Cowan**

*(motivated by Nola Anderson)*

The question “What is feed worth?” has as many answers as there are buyers of feed. It depends on what sort of animal you are feeding and how much that animal’s genetics are worth preserving. Also it depends on the subjective value you place on keeping the favourite family pet alive as compared to one of 20,000 head that, if yarded, will go to the sale yard on the next truck.

The question “What does feed cost?” is at least quantifiable to some degree. From the information I have been sent by Nola recently, there does seem to be a few variables which do affect the actual cost.

The first obstacle is to set up parameters with which you can compare the final products. For example, this may include values for dry matter, metabolisable energy, crude protein, dry matter digestibility and neutral detergent fibre. These figures can be obtained by sending hay or silage samples to State Government Feedtest laboratories. There is a randomness in the collection of the sample, but it is arguably the best indicator available.

The next problem is to calculate the actual costs involved in the production of the hay or silage. Without the inclusion of capital costs – interest, land, tractors and other implements which are not used solely for hay making there are still a considerable number of costs which have to be accounted for if you are actually making the silage yourself. It is probably easier to assume, for the sake of argument, that a contractor is brought in to do the job – on the day you want them (right!!) and there are no interruptions to the process like rain or breakdowns. There are problems even with something as seemingly uncontentious as the timing of the cut. To organize a contractor a month ahead of when you think the prime time for cutting the hay will be, with all the unpredictability of weather in that month, to have them cut the hay in the late afternoon when the sugar content of the grasses and clovers will be highest and to tend the hay immediately after cutting – well good luck with that!!

My local contractors charge around the \$22/bale for making hay (5’ bale) and \$32/bale for silage – plus GST of course. These costs include mowing, tending, raking, baling and wrapping. All that remains to do is put a value on fertilizer, water, seeding, labour, moving from paddock and storing, loading (if sold off-farm), weed control and wastage when feeding out.

I can give you three examples of how different people value hay. The first is very basic and does not really indicate the cost of the hay. I can only assume that they are making money selling it at the price they have quoted – a reasonable assumption given the existing conditions in Victoria. One particular bloke was selling his hay for \$70/bale (a 6’ x 3’ x 3’ bale – weight unknown), plus GST, on farm. The feed value of his hay was:

Dry Matter	65.4%
Metabolisable Energy	9.8 MJ/kg DM
Crude Protein (CP)	10.5% of dry matter
Neutral Detergent Fibre	64% of dry matter

In the above example, to me anyway, this is pretty average hay. I would feed this hay to stock that does not need building up. Lactating hinds and stags growing velvet need feed that contains over 14% CP. We have been selling first cut pasture hay in this area, about the same values as above, for \$70/5’ bale. Apart from the transport aspect, it is interesting to note how much better value the round bale is – the round bale has hay with a volume of 63 cubic feet versus 54 cubic feet in the big square.

The second example is a little more scientific. It comes from David Shambrook of the DPI Leongatha, Victoria. "The cost of actually putting on fertilizer and controlling weeds, etc worked out to be around 10 to 11 cents per kg DM grown. On top of this, you then need to add the cost of silage making. This is the cutting, raking, baling and wrapping. The all up cost of the conserved silage was about 25 c/kg DM in the bale. So when you look at what the value of the silage is, you need to account for the cost of growing and then conserving this feed. I am not sure if you then want to put a value on the nutrients or energy of the feed you have conserved. This could conceivably add more to this cost. But at the bare minimum the value in this case would be 25 c/kg DM or \$250 per tonne DM.

An average bale of silage weighs about 400kg and maybe 50% DM. If the cost of production of the silage is estimated to be 25c/kg DM the cost of a bale would be \$50.

In my own experience with irrigation, I am a little of the \$50/bale for silage. I employ contractors to make the hay and silage. We make silage as soon as we can get on the paddocks in October and for the rest of the season we make hay. Hay is a lot cheaper to make than silage and is exactly the same quality. Given that we are charged about \$32/bale of silage, the following figure outlining the other costs seem compatible with David Shambrook's example.

On the irrigation block we have the following costs involved in making a bale of silage:

Pumping/diesel	\$6
Fertilizer	\$8
Cartage/Loading	\$3
Labour	\$4
Silage	\$32
<b>Total</b>	<b>\$53</b>

**This amounts to 26.5 c/kg DM.**

The quality of this silage varies quite a lot but generally has the following values – or they are the values I use when calculating what I need to give to my stock. We try to bale the silage at about 50% moisture. Based on previous feed tests, I assume that the protein content is about 16%, the metabolisable energy is about 9.7 MJ/kg DM and the digestability is about 9.5.

If we make hay off the irrigation, we have exactly the same values for the feed but it costs us about \$22 to make a 5' round bale. Most of these bales are about 300kg and are about 25% moisture – they are stored out in the open. This implies that each bale has about 225kg of DM in it. Although I do not know for sure, I am assuming that the same number of bales of silage and hay are produced on a give area. So the cost of producing a bale of the hay would be \$43. This means that it cost about 19 cents/kg of dry matter to produce hay.

**Take home message – if you can buy good hay for under \$33/5' bale you are saving money and more than likely, you can utilize your pastures better.**