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Inoculants for silage - Are they worth it?

Making quality silage is not only about mowing at the right time to maximise sugars and protein in the grass, but also about getting a fast fermentation of the ensiled grasses to ensure that the quality is kept in the harvested product. In recent years farmers are becoming more aware of the need to add an inoculant mixture to the crop prior to baling/ pitting the silage. This is because:

- Many rye grass species do not have enough naturally occurring beneficial bacteria to enhance fermentation.
- If not enough beneficial bacteria are present, then ensiling (pickling if you like) of the product is slow and there are energy and protein losses due to heating. (Silage often smells like tobacco). Cows like it but it's not the best quality!
- Any "wild" bacteria that are present are not in enough number or effective enough to complete a fast fermentation of the silage.
- The faster the pH is lowered the more quality is preserved in the feed.
- The cost of adding the correct bacteria is quite cheap- under \$2.00 a wet tonne. This is a small investment to produce better silage with more sugar, less spoilage and better milk production from the herd.
- "All inoculants are not created equal!" Many have poor bacteria counts and poor performing species- please talk to your tech rep at Browns as we can advise on the best inoculant for your crop.
- There are also preservatives available- these do not supply any bacteria but attempt to preserve the silage. They may have uses but they will not make your silage better! Whereas a correctly applied high bug count inoculant will enhance your silage through faster pH drop and therefore more quality preserved.
- Please do not use any product with Faecium bacteria in it. These have been associated with health issues in farmers (see an earlier article I wrote also re-printed in How Now Gippy Cow and the Australian Dairy Farmer last year) There are better safer bacteria available like Lactococcus lactis, Lactobacillus plantarum and Pediococcus pentosaceus that work at different temperature ranges in the silage and so work together to keep the pH low in the silage and stable for storage.
- Please allow us to assist you to make the right choice for your situation, talk to your Browns rep for independent advice on this important area of your fodder management.



Do not make poor quality silage this season

Over the last few seasons we have been free testing silage for clients. And the range of values has been alarming. Many silages are too high in NDF so cows cannot eat enough to produce well as they fill up too quickly on high fibre, low protein, low sugar silage.

It all costs the same to make but the difference to your bottom line can be enormous.

The aim of making silage is to preserve high quality feed for a later time in the season when pasture is in low supply or of poor quality to keep cows milking and avoid paying for bought in feed.

So - how do we make good silage?

- Aim to mow and harvest at the grass stage that you would normally graze it with cows.
- If it's too long to graze it's too long for quality silage!
- If it gets away- get in on it and give it a graze to reduce the NDF and thicken it again.
- Take paddocks out of rotation if they look like they will be more mature than you would like and harvest them. (before they get too mature)
- If the paddocks are wet and locked up and feed getting away then go in and graze lightly and get off to avoid pugging and still make good silage as well!
- Don't restrict cows and lock up too early.
- Quality over quantity every time..no good making a load of "dry Weet Bix" that then requires balancing in summer with costly lupins etc.
- Use a good inoculant! Don't rely on naturally occurring bacteria on the grass that probably are not there. Aim to get a fast efficient fermentation with no loss of quality.
- Use enough wrap! And the right stretch for the baler ie don't use 50% stretch on a baler set for a 75% stretch etc.
- Keep vermin/birds away from the bales/stack. Keep weeds/grass short around stacks.
- Exclude all air- make sure you manage the pit face properly- open a small silage "face" and use a cutter if you can.
- The more air you let in the faster the degradation of your feed.
- Don't harvest too dry or too wet. In bales wet feed turns clostridial, in pits effluent runs out.
- If too dry then air is difficult to exclude and it was probably done too mature.
- Pick the best days you can to mow- with a light wind, wilt, tedder, rake and bale or pick up and have it all done asap. The longer you leave grass down the drier it gets with loss of quality. Maximum wilt occurs in good conditions in the first 4 hours, after that its slow and you lose sugars.
- But don't let your contractor come in and cut it sopping wet either- or all you get is smelly butyric acid silage that is of no value to cows.
- Use us! We can test your pasture before you cut it to check there are enough sugars and carbs to make great silage. Its free for clients - do it!
- Please discuss silage with us- we have to balance it for you later in the shed so if we can save you money later by helping now that's a win for everyone.



Silage – Quality or Quantity?

By DEDJTR Ellinbank

Do I make a bulk amount of silage of poorer quality or less silage of higher quality?

There are no right/ wrong answers to these questions but think about some of these considerations. Many farmers will chase high yielding crops to rebuild silage storages. This is fine if you are looking to stick away silage of medium to low nutritive value. This silage will test under 10 mega joules of metabolisable energy per kilogram dry matter (MJ ME/kg DM or ME), under 10 – 12 per cent crude protein (% CP) and over about 55 per cent neutral detergent fibre (% NDF). This silage has a limited role due to its lower feed value. It can only be fed in relatively small amounts without affecting milk production, so other higher quality feeds need to make up the bulk of the diet if milk production and cow condition are to be looked after. It is suitable for late lactation, low producing cows and dries but if this is how you always make it the herd will struggle when fresh to reach peak milk.

Some farmers, having made lower yielding, high quality silage, have been surprised at how well the cows have milked, and will lift production if enough is fed. This is not surprising because this silage is at or near grazing height pasture and can test over 11.0 ME, over 16% CP, and below 55% NDF. The earlier the pasture is cut the more leaf and less reproductive tillers it will have compared to heavier cuts usually shut up for much longer or pushed too far with nitrogen.

FEEDTEST has analysed silages in recent years as low as 7 ME, 4.5% CP and as high as 77% NDF, not good enough for even dry cows without a supplement to lift its quality! On the other extreme, in good silage making conditions, pasture silages can be attained with over 12 ME, over 25% protein and about 35% NDF. Where does your silage normally sit? Can you do better? Let's look at some other important factors when deciding to go bulk or quality. Look at the paddocks after the heavy crops come off. They will be yellow, have a lot of bare ground between ryegrass plants and take a long time to regrow. **This is because a major high quality pasture for silage guideline for maintaining a dense high quality pasture has been broken.** The pasture has grown well past three green living leaves and sunlight has not reached the base of the sward.

Result: new leaves cannot reach sunlight, no new tillers generated, existing daughter tillers weakened or died off, aerial tillering meaning tillers hung out to dry - all leading to the yellow pasture picture described below that will take several rotations to thicken up again. Pasture harvested at or just before canopy closure will be about half the yield as much traditionally harvested silage. This silage will be as high a quality as possible from ryegrass and may have just over two or just under three green leaves, depending on cultivar, nitrogen use and moisture.

Contractors hate harvesting these lower yields for obvious reasons but you are paying the money for a high quality product. However, to be fair, they are equally entitled to charge slightly more due to the costs involved to cover the ground with mowers, tedders, rakes, etc. and farmers should still be ahead harvest cost-wise versus income from this silage. It is possible still to put away the same total tonnes of silage as achieved by heavy yielding paddocks. This is achievable through more area at four weeks compared to half the area at eight weeks. This maintains grazing pressure which maintains pasture quality, results in higher quality silage and actually usually results in more total spring growth. A "win", "win", "win" situation. Look at these short lockup paddocks once silage is removed. They should look a similar colour, or only slightly a lighter green colour, compared to a timely and well grazed paddock.

Regrowth will be dense, quick and more area available since most clumps will come back as high quality and most will be grazed next rotation. Need more encouragement? Table 1 shows the impact of quality and losses (fermentation, storage and feeding out) on silage for milk production. Let's say we normally chase heavy cuts of silage (350 t DM) and now try for lighter yields but similar total amount of silage made this year. Let's work on 8 ME to produce one litre of milk (ME/L) and milk price is \$0.40/litre. The 8 ME is well above 5.5 ME/L often used but this allows for some cow condition gain, walking, substitution, etc. so a conservative value.

Losses (%)	Silage Quality (ME/kg DM)			
	9.5	10	10.5	11
25	0	\$6,560	\$13,125	\$19,690
50-70	\$24,940	\$32,800	\$40,680	\$48,560

Based on the figures provided, if a target quality of 11 MJ/kg DM and losses of 10% are achieved there is an increase in milk income of \$48,560 compared to producing forage of 9.5 ME/kg DM with 25% losses.

Table 1.

Impact of the improvements in silage quality and reduced losses on additional value of milk produced.

Hay Report

Good stocks of quality cereal hay, straw & vetch hay exist in the North West of the state. Demand has been quite low and we are now seeing prices easing as we get closer to harvest. Early new crop vetch hay will start to be cut in early September and depending on weather would be in the bale early to mid October.

If the rain continues to fall in Gippsland we could expect a slow demand for Northern Vetch to Cereal Hay. As such we would expect to see historically low prices for Northern Hay to start off the new season.

If you request old crop cereal or vetch hay call the office for a delivered price.

Director, Cameron Brown

Grain Report

Spring 2020

Prices for wheat & barley are continuing to fall on the back of good rainfall throughout most of the cropping areas in the last few weeks. With favourable conditions forecast through spring we should see large yields, good quality and low prices for cereal grains.

If you are interested in taking advantage of these cheaper new crop prices between now and harvest please talk to Matt, Lindsay and Christine to advise on contract prices.

Director, Chris Brown

