

# Weston Animal Nutrition

## Autumn 2008

Hopefully you had a great Christmas and New Year period and have managed to get through Summer relatively unscathed. There have certainly been some challenges out there. It is now time to look forward to a new season. This issue looks at some of the things that you might need to consider for Autumn and leading into Winter.

### **Changing with the seasons – bring on the pasture**

#### General Comments

While some areas have had good rain over the last couple of months there are others that are waiting in hope of a good Autumn break to kick things off. Those who haven't been fortunate enough to have had much grass over the last few months will need to change pellets and adjust their feeding rate as the grass arrives.

#### Protein content

As the grass arrives you will need to back off the protein content in the pellet. The last thing you want is to overload the cow with protein, which will then cost her energy to excrete. You see this excess as urine scalds in the paddock, and smell it as ammonia in the shed.

#### Energy content

Go for a maximum energy, high starch pellet to help balance up the protein in the lush Autumn/Winter pasture.

If you change from a 12 MJ to a 12.5 MJ pellet there is enough energy for an extra 85-90 Litres milk for every dry tonne of pellets consumed. This equates to somewhere between \$35-45 per tonne difference between the two. So, each time the price list comes out it is worth checking the difference in price between a 12 and a 13 MJ pellet. The higher ME pellet could provide better value. Ultimately you should be chasing the best value product, not just the cheapest.

Remember that you pay a fixed price per tonne for cartage and if you are buying a 12 MJ/kg DM pellet, you are paying more cartage per MJ of energy than if you were to buy a higher ME pellet.

### Fibre content

Aim for a pellet that is as low in fibre as possible, to avoid pushing grass out of the ration. If we go back to the example above, the nice thing about higher ME pellets is that they typically have lower levels of NDF also. I.e. a 13 MJ pellet might only be 16% NDF while a 12.5 MJ pellet is 20%. This can equate to a litres worth of milk in lost grass intake for an average feeding rate of 5 kg of pellets.

Having said that if you have a great Autumn break and end up with a lot of pasture to graze, don't forget about functional/physically effective fibre (the chew factor stuff). Good quality pastures are often inadequate when it comes to supplying fibre that will hang around in the rumen and form a mat for the bugs to go to work in. Therefore it is a good idea to have ad lib straw feeders near the dairy somewhere to ensure that your milkers can grab it if they need to. Fibre is one of the few things a cow can tell she is lacking so if you put it out, she will eat it if necessary. Straw is the best for this job because they generally don't eat too much of it, especially if they know that they have some excellent quality pasture waiting for them down the paddock. If they are hitting the straw really hard, they might actually be a bit hungry, rather than dramatically short on fibre.

If you are concerned about making a mess with hay feeders at the dairy, you can roll the straw out in the paddock, but you will need to be prepared for some extra wastage (and another job).

### Feeding levels

When there is plenty of grass in the diet, work out what the target milk production is for the month and then feed 0.18 – 0.25 kg of pellets per litre of milk. Reasons for the range include body condition management, pasture quality, and various other management challenges. You certainly don't want to be feeding much over 0.25 kg pellets per litre of milk when there is plenty of grass around. Ideally you would average no more than 0.25 kg pellets per litre of milk for the whole year.

### Summary

The focus is shifting towards maximising pasture intake, rather than driving conversion of conserved feeds. Be sure to change the type of pellet and the feeding rate as more grass becomes available to help boost profitability coming into Winter.

### **Fat test – an issue on kikuyu dominant pastures over summer**

Some South Coast (NSW) farms have had issues with milk fat test over summer on kikuyu dominant pastures. The biggest reason for this seems to be a lack of protein – particularly rumen degradable protein.

Rumen degradable protein is the stuff that feeds the bugs that ferment the feed for the cow. If the bugs don't receive a balanced diet, they will not do the job of breaking down fibre properly. This means that even though there is

more than adequate fibre in the diet (up to 60% NDF in kikuyu pasture), it isn't getting fully utilised. Over summer it could be an idea to use a slightly higher protein pellet (16-18% crude protein) to ensure that your cows are able to make the most of the low protein (12-14% crude protein) kikuyu that they have available. You should also throw out a free-choice salt lick to help them handle the excess potassium that comes from kikuyu.

Other potential causes of low milk fat (not necessarily an exhaustive list):

- Lack of energy for the bugs – just like protein is important for the bugs to grow and to multiply, they also need a good energy source, and they need it to be available at the same time as the protein. Otherwise the ration is uncoupled.
- Lack of chew factor (functional fibre) – the cow needs a rumen mat to support the rumen bugs and also to keep the rumen contracting and mixing (so that she can chew her cud).
- Lack of fermentable fibre – the stuff that breaks down into building blocks for milk fat. Lack of time to break down the fermentable fibre (ie. high rumen flow rate) can also be an issue, particularly on high quality ryegrass pastures.
- Low rumen pH which can kill off the fibre digesting bugs if it gets low enough – linked to an imbalance between pellets and forages
- High potassium intakes, reducing magnesium absorption – magnesium is required by one of the enzymes that is important in milk fat production in the udder.
- Too much fat in the diet, particularly unsaturated fat
- Lack of body condition to donate – fat from body condition is an important contributor to milk fat, particularly when the cow is fresh.

## **Lead feeding**

Anyone with Autumn or Winter calving cows won't be far off lead feeding again (if you haven't started already). As we have mentioned before, it is important to ensure that your cows have a smooth transition into the milking herd. The better they transition, the higher they will peak (assuming they are receiving a balanced diet in early lactation), which will mean more money for you with the current milk prices.

This means spending the last 3 weeks of her dry period preparing her for a milker diet – basically feeding her a little bit of anything she is going to eat as a milker. At the same time we need to meet her energy, protein and mineral requirements and ensure that her diet is anionic to avoid metabolic issues at calving. The best way to do all of this is to feed 3-4 kg/cow/day of Calverite for 3 weeks prior to calving. If you balance this up with a small strip of grass (say ½ - 1 hrs grazing) and then fill them up on cereal/pasture hay the job will be pretty well done. If you are feeding a TMR to the milkers you could feed 2-3 kg of the mix to the springers each day also, in place of the grass.

It is important to:

- meet energy, protein, fibre and vitamin and mineral requirements,
- ensure the cow is adapted to a milker diet
- keep intake levels up
- keep the cow full on fibre once the other requirements have been met

## Body condition management

For people with Winter/Spring calving cows, it could be worth thinking about making an investment in body condition fairly soon. Body condition pays great dividends in early lactation if it is managed properly.

Here are some basic facts:

- One Body Condition Score (BCS) equates to roughly 42 kg liveweight for a Friesian.
- One BCS will return 1000 L of milk over the subsequent lactation, if managed correctly.
- One BCS allows 1 kg weight loss per day for the first 6 weeks of lactation. Every kg lost is worth 28 MJ per day, which is good for an extra 5 L of milk.
- Each kg of weight costs 45 MJ while milking or 58 MJ while dry – dry cows are less efficient at putting on weight so the time to get condition on milkers is now.
- It takes an extra 4 kg pellets per milker per day to put on 1 kg per day (assuming that you don't have extra pasture to offer first).
- It takes 5 kg pellets per dry cow per day to put on 1 kg per day. This is on top of keeping them full on cereal or pasture hay. You could potentially halve this amount if they were going to be grazing during their dry period.
- There is at least a 4:1 return on investment (depending on milk and pellet prices) for body condition, without considering the effects on milk components, fertility, and overall cow health.

### Example – 3 months left until dry off and need another 1 BCS across the herd

- 42 kg to put on over 90 days = 0.5 kg per cow per day = extra 23 MJ energy required each day
- For every kg dry matter of pellets (remember there is still some moisture in them) we feed we get 12.8 MJ.
- This means that we would have to feed 1.8 kg dry matter of pellets = 2 kg as fed, extra per day.
- 2 kg per day for 90 days is 180 kg pellets per cow. If pellets are around 50 cents per kg (after freight), that will cost \$90 per cow.
- The return is 1000 L of extra milk at 40 cents per litre = \$400.
- You will have just turned \$90 worth of pellets into \$400 of milk over 12 months. That's pretty hard to beat at the bank.

## Your local Weston Animal Nutrition representative

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