

Advance

update

November 2013

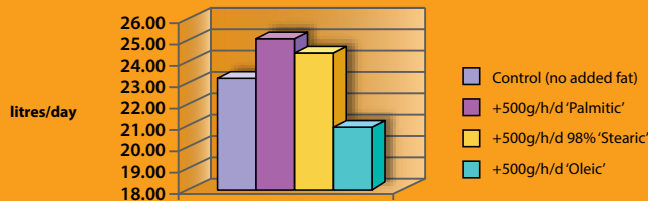
Advance is a sister company of Kite and works on behalf of clients to develop new products which will benefit their businesses and to get the best deals on a range of dairy farm inputs.



High C16 fats increase milk yields and butterfats

Fixed constant feed intake with fat added directly into the duodenum (100% protection)

Effect of fatty acid type on Milk Yield



École Nationale Vétérinaire & École Nationale Supérieure Agronomique de Toulouse

When fed at the typical rate of 0.35-0.45kg/cow/day these exceptionally high C16 fats will increase butterfats by 0.2-0.3%.

Now that cows are settling onto winter diets we need to think about getting the best we can out of the herd. Many milk contracts are paying between 1.5 and 2.5p/1% butterfat and the trend is for this to increase further so we particularly need to consider how we can increase butterfats.

The starting point is to ensure we have a happy, healthy rumen and with the high starch diets we are seeing on many farms this winter we need to be using products such as Supersaf concentrated yeast (as featured in the last Advance insert to the Kite Newsletter) to ensure full utilisation of all feeds being fed.

Once we are sure the rumen is working to maximum efficiency then dietary fats will increase the energy density of the diet and therefore add litres of milk, enhance body condition and help improve fertility in the high yielding dairy cow. With the high rates of payment for butterfat in many contracts it makes sound financial sense to optimise milk butterfat levels. The best products to enhance milk yields and butterfats are the highly energy dense palm fat products such as Advanced Palmfat C16 or Butterfat Extra. These are the highest ME available at around 38-39 MJ ME/kg DM. The chart above shows that adding palmitic fat to

the diet is a very effective way of increasing yields – almost 2 litres above the control of no added fat – as well as enhancing butterfats.

When fed at the typical rate of 0.35-0.45kg/cow/day these exceptionally high C16 fats will increase butterfats by 0.2-0.3%. We recommend Advanced Palmfat C16 and Butterfat Extra as the best products to use. They cost around 33-43p/cow/day when fed at the above rates and deliver around 13-17MJ cow/day in a rumen protected form. This typically results in an additional 2 litres of milk/cow/day, worth around 65-70p/cow/day plus the additional value from the extra butterfat of around 10-30p/cow/day for a 30 litre cow depending on milk contract. So the economics are overwhelmingly in favour of adding protected palm fat products to your cows diet this winter.



Synchronising energy and protein supply in the rumen



Getting the right balance between protein and energy supply levels and their rate of release inside the rumen is the key to achieving optimum performance from the cow. The aim is to feed the billions of bacteria and other bugs to maximise the amount of microbial protein flowing from the rumen, which is the best form of protein for the cow.

With relatively cheap cereals and good quality maize silage on a lot of farms we are seeing some high starch diets. We need to make sure there is an adequate supply of rumen degradable protein to ensure that all the energy available from the starches, sugars and fibre is captured. If there is not enough rumen degradable nitrogen available then milk production will be reduced and there is also a higher risk of acidosis, as the excess starch will be converted to lactic acid.

Traditionally we have used plant protein sources such as rapemeal and soyabean meal to provide a range of protein release but we now have a protected urea product called **Nitroshure** available to replace some of these protein sources. Whereas feed grade urea is very rapidly available inside the rumen, so the microbes can't capture it all, the encapsulation process with **Nitroshure** produces a slow release of rumen degradable protein – more akin to the release curve of soya. This synchronises well with the starch fermentation and maximises the microbial protein outflow from the rumen.

Nitroshure has an ME of around 13.3MJ/kg DM and a crude protein equivalent of 255% and so around 150g replaces around 900g of soya. With nearby soya prices around £400/t using **Nitroshure** makes for cheaper diets and releases room

inside the rumen for more forage or more energy feeds. Increased energy density and starch levels typically result in around an extra 1 litre/cow/day from the diet. In addition the fibre content of the ration is digested better so we get healthier rumens, more consistent dung and typically 0.1-0.2% higher butterfats and proteins.

Kite Consultants have been working with an increasing number of herds around the country where we have been bringing this product in and reducing or removing soya from the diet altogether. This overcomes GM and sustainability issues and allows us to boost energy density, with starch levels of up to 23-25%, resulting in excellent cow performance and significant financial benefits.



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