

The role of palm oil in a sustainable dairy industry

This is the third of four articles looking at issues relating to the sustainability and use of palm oil in the dairy industry. The articles are covering the following topics :

1. Palm oil in a sustainable world
2. Efficient milk production and role of fat
3. **UK's first fat supplement manufactured using only certified sustainable palm oil**
4. Saturated fats in milk

3. UK's first fat supplement manufactured using only certified sustainable palm oil

The first UK-produced fat supplement manufactured from certified sustainable palm oil will be launched by Volac at the Dairy Event and Livestock Show. Called Megapro 30S, the supplement has improved milk yield by over 12% in trial work at the University of Nottingham, and can contribute to reducing methane emissions.

Megapro 30S contains 30% fat and 23% protein with a metabolisable energy (ME) concentration of 19 MJ/kg DM. The product is unique in offering sustainable protected fat and protected protein in the correct balance recommended by research (assessed as grams of undegraded protein per MJ of ME from fat) to ensure maximum performance benefits are achieved from the fat component.



The protected fat component is manufactured from segregated, fully-traceable and certified sustainable palm oil sources, while the protected protein component is supplied by rapeseed which has been uniquely processed to improve rumen-bypass properties. The product also contains a desirable amino acid ratio, supplying lysine:methionine of 3:1, which is ideal for milk production and is superior to many other sources of protected protein, particularly those based on soya.

The new fat supplement is targeted primarily at improving efficiency of production in dairy herds while offering important environmental benefits. Trial work at the University of Nottingham reported an increase in milk yield of 12.3% when cows were supplemented

between week's three to twelve of lactation. Furthermore, the protected fat in Megapro 30S is not fermented in the rumen, improving the efficiency of energy use relative to other non-fat ingredients, and has reduced methane production per litre of milk by 13.3% in research work undertaken at the US Department of Agriculture, Beltsville and University of Maryland (USA).

Megapro 30S offers producers a concentrated source of protected energy and protein in the recommended balance for efficient milk production and comes with excellent sustainability credentials. The latter follows from Volac's commitment to sustainable global food production and their arrangement with New Britain Oils in Liverpool who have established the first refinery dedicated to segregated, fully-traceable, certified sustainable palm oil.



The development of Megapro 30S helps link together the important issues highlighted in the first two bulletins sent earlier this month. The first of these bulletins, **'Palm oil in a sustainable world'**, demonstrated the key role palm plays in meeting the energy and oil needs of the population. Most importantly, as the highest yielding source of vegetable oil in the world, palm oil production utilises a considerably smaller area of land than would be required if reliance was placed solely on other vegetable oil sources such as soya. The second bulletin, **'Efficient milk production and role of fat'**, highlighted the unique roles fat can play in rationing dairy cows.

Megapro 30S offers a new concept in fat supplementation, combining high energy and protein in a single product, in the recommended balance, with the additional environmentally-related feature of using only sustainable palm oil as a fat source.