

Dietary fats essential for meeting cows energy needs

Professor Adam Lock from Michigan State University will be discussing the hows and whys of feeding fats at this June's TotalDairy Seminar. *British Dairying* visits a farm in Herefordshire where fat supplementation and top notch feed management are helping to achieve high yields, constituents and fertility.

Feeding fats, regimental attention to feed management and transition cow care is proving the formula for success at New Cross Farm where the 460-cow herd yields 39 litres a day at 3.7% butterfat, with a calving interval of 390 days.

With cows working to the best of their genetic potential, farmer David Manning and herd manager Doug Hume are keen that every element of the system works at its optimum. Ration balance and presentation is part of that mix, with the use of supplementary fats viewed as an important means of meeting cow requirements by maximising the ration's 'power per mouthful'.

Doug explains: "If you've got high yielding cows, feeding fats is really the only way you can get a high inclusion of energy into the diet. We have a tranche of cows doing 60 litres plus. They require a lot of energy to maintain themselves and get back in-calf. You have to make what they eat as energy dense as possible as a cow can only eat so much. Fats allow you to do that."

The fact the diet delivers enough energy to meet the cows' requirements means performance



Doug Hume believes feeding fats is essential for high yielding cows.

does not come at the detriment of body condition or fertility. The herd is currently achieving a conception rate to first service of 42% with 50% in calf by 100 days.

Cows are milked three times a day and all of the milking herd is fed the same full TMR ration. This is made up of grass and maize silage, soya hulls, a meal, soya, rape, bread, minerals and sodium bicarbonate along with 250g per head of a pro-

tected fat and 250g of a C16 fat.

Although the farm is on a liquid milk contract, the business strives to maintain a good milk fat content. As a result, striking the balance between yields and fats is an important one. Doug believes achieving good constituent levels is also a useful gauge of cow health.

"Our aim is to maximise yields and cow health. Milk quality comes into that as quality is ultimately a sign

of cow health. Efficiency is also important. You've got to feed efficiently and cost effectively," he explains.

Over the last 15 months, Doug has been working closely with Dr Chris Bartram of Mole Valley Feed Solutions to ensure the ration is balanced effectively in both lactating and dry cows. This has resulted in an 800 to 900 litre/cow increase in yields, while milk fat has also climbed by about 0.3%.

Chris believes calculating the return on investment is particularly important when feeding relatively expensive fats.

"Make sure you evaluate the economic response of feeding fats as it may not be worthwhile on specific milk contracts," he advises.

At New Cross Farm, Bromyard, the protected fat is being fed to drive yields, cow condition and fertility, while the C16 influences butterfats. The fact both are fed separately, provides flexibility to tweak either one, if necessary.

However, Chris says it's important to consider what feed materials fats are being fed with as combining them with certain

Continued on page 28.



David Manning.

Continued from page 26.



Feed refusals are monitored carefully to track what the cows are eating.

other high oil feeds can impact on palatability.

Transition cows

As well as lactation feeding, Doug believes transition cow management is one of the most important factors influencing cow performance on the unit. Over the last 15 months, a partial DCAB ration has been reintroduced, which has helped improve early lactation yields.

Cows 0-10 days in milk now average 49 litres a head and heifers, 36 litres. Fresh cows are managed in a dedicated straw yard for the first week and then join the main herd. Transition diseases are minimal with most cows cleansing within six hours, 5% dirty and milk fever a rarity. By closely monitoring and recording feed refusal rates on a printed spreadsheet, the team are able to carefully track intakes and double check transition cows are eating what they are rationed for. This is also repeated in the milking group. This means any changes can be picked up and communicated to Chris so any ration tweaks can be made promptly.

"We want 40 to 50kg left for 30 dry cows. If there's anything less, they're not being fed enough, if there's anything more, they're not taking in enough goodies. If they're not getting enough transition minerals, that's when you start to get problems," says Doug, who believes intakes at this time are crucial in order to limit negative energy balance around calving.

To encourage intakes, feed

is pushed up six to eight times a day across all cows. Forage is also tested at least once a month by Mole Valley Farmers' feed specialist Ian Turner. This allows any variations in quality to be factored in to diets. However, the aim is to be as consistent as possible. Doug cites this as one of the reasons why body condition is so even across the herd.

The majority of cows calve in at body condition score three with most losing a quarter of a score at their post natal check which is carried out by vet Matthew Pugh of Belmont Vets.

Doug concludes: "You want her to maintain body condition and get back in calf—preferably within 100 days—and you need a high density ration to do that. And you need a good transition ration. If you don't get that right, it will all fall to pieces."

TotalDairy Seminar—what you need to know

When: 14th to 15th June 2017

Where: Keele University, Keele, Staffordshire, ST5 5BG

What: The two day event includes a top lineup of expert speakers from around the world talking under the theme of "Efficient Dairy Farming". As usual, delegates will be able to choose which lectures and smaller group, interactive workshops they would like to attend depending on their area of interest.

This year's main topics include youngstock, fertility and nutrition.

- Find out more and book tickets at www.totaldairy.com and follow @TotalDairy on Twitter.

Feeding fats to be key topic at TotalDairy

North Devon-born farmer's son, Professor Adam Lock from Michigan State University will be talking about the role of dietary fats at this year's TotalDairy Seminar.

He will be drawing on the latest research to illustrate how feeding supplementary fats can influence milk fats and yields, while also discussing the influence of milk fat and diet on energy partitioning and body weight. The importance of choosing the appropriate supplement with the correct fatty acid profile to achieve desired results will also be discussed.

Prof Lock explains: "We're starting to understand that different fatty acids have a different biological effect on the cow. So we need to think about the different fatty acids that fat supplements are providing and the different effects these may have on milk production and body weight."

Prof Lock will also provide practical advice on avoiding any unwellcome dips in milk fat and highlight the positive influence of dairy to human health.

He'll be joined by many other leading ruminant nutrition experts including Michael Ballou of Texas Tech University and independent consultant Ric Grummer from the US who will cover various nutritional topics, including transition cow management.



Professor Adam Lock.



Transition and fresh cow care is vital for high yields and good fertility.



Small group workshops at Total Dairy will look at topics in more detail.