Take steps to avoid herd fertility losses when grazing this season

Feed for fertility at grass

With many cows calving during the past three or four months, fertility management is key in order to meet many of the performance targets set for dairy herds. Here we share some nutritional pointers on how to achieve an acceptable level of fertility performance this summer.

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NMR data highlights the continual decrease in the fertility of the national herd and while the average herd yield has risen from 6,865 litres to 8,012 litres during the past 10 years, calving interval has increased by 31 days to 426 days.

The cost of this increase will vary by farm, dictated in most by milk yield, yet it can be assumed that between £3.00 and £4.00 per cow per day will be lost every day that the calving interval exceeds 365, and most significantly every penny of this loss is hidden from daily observation.

"So, with the early summer months being a key time in the year for the breeding of cows, fertility management now is central to reducing this calving index figure," says Thompsons' ruminant specialist James Black.

"A pregnancy can only occur when the basic principles of breeding are all present and correct at the appropriate time. Oestrous must occur and be detected and the cow must be mated correctly to allow a pregnancy to establish. Adequate nutrition, along with good stockmanship, enhances the success of this relationship," explains Mr Black.

James Black: "Never ration cows to lose body condition at grass"

Embryo losses

Three key areas involved in dairy cow nutrition encompassing energy, protein and mineral availability have a significant effect on herd fertility.

With later calvings and an increased number of cows in late May yielding 35 litres plus energy should become a key concern for many producers. Energy intake relative to milk yield and milk composition is the key determinant of energy status in the cow.

"Body condition score is the visual guide that producers can monitor. A cow losing body condition in ideal grazing conditions, irrespective of milk yield, should ring alarm bells," says Mr Black.

"Profitable milk production requires the effective use of grazed grass and supplementation with concentrates. Under no circumstances should the fresh calved modern dairy cow be rationed to lose body condition at grass.

"Feed rate has the biggest impact on energy intake. The concentrate level should enhance grass intakes and match milk yield produced. Any over or under supplementation will have significant negative impact on fertility. Energy supplementation in the form of concentrates or a TMR should aim to improve energy balance by increasing intake without increasing milk yield," he adds. "Enhancing the nutrient density through the use of protected fats, such as Megalac, has, in trials, shown an increase in energy intake and progesterone levels. This may be an alternative to increasing the amount of concentrate fed."

High crude protein levels at grass have long been associated with embryo loss at farm level. Recent research shows that it may also be linked to low energy intake, which causes the loss, as opposed to the protein level itself. As concentrate levels vary immensely at grass, care should be taken to try and keep dietary crude protein levels as low as possible in the early season, particularly if grazed grass is testing above 20%.

The exact mechanism of embryo death is uncertain, but it seems feasible that the excretion of excessive protein in the form of urea alters uterine conditions and therefore reduces herd pregnancy rates.

"Excessive protein levels will also enhance body condition loss causing milk composition and fertility to suffer further," says Mr Black.

A balanced approach in ration design should encompass various energy sources with an adequate supply of degradable protein, and an enhanced bypass protein level to maximise grazed grass protein supply.

Minerals status

Mineral supplementation is often overlooked particularly on cows fed to yield at grass. Minerals are often added to TMRs during the winter and then forgotten once cows go to grazing.

Grazed grass usually provides an inadequate supply of important minerals, such as copper, zinc, iodine and selenium. In many circumstances it will also be deficient in the supply of vitamin E for high yielding cows.

Minerals and vitamins interact in many ways and a deficiency of each individual mineral will not only affect fertility but also other major body functions.

Fertility can be affected by copper availability and the presence of antagonists such as molybdenum. An adequate supply of available minerals should be supplied to the dairy cow.

Measurement of what grazed grass supplies and an indication of cow status through blood or milk mineral profiles will allow each producer to assess their individual situation.

Particular emphasis should be placed on copper status and supply to ensure oestrous expression and conception rates are maximised. "From a nutritional perspective, minimising body condition loss in early lactation is crucial to improving conception rates at this stage in lactation," says Mr Black.

"Once cows stop cycling due to poor energy status, significant increases in calving interval will occur. Protein levels should be monitored in grazed grass so that supplements can be altered and production and animal health can be maximised.

"And, as with grass silage, grazed grass is not a complete feed and the mineral status of both grass and the herd should be determined so that effective supplementation can enhance performance," he adds. |

Cycling signals: bulling activity is a sign that nutritional management is on track