

Better feeding can halt the

The true cost

Poor fertility is one of the biggest factors undermining herd profitability in the UK, yet rarely is the full impact calculated, or the issue given high enough priority.

text **Roly Marks**

As milk yields have steadily risen and the pressure on cows, staff and infrastructure has increased, there's little doubt that herd fertility has suffered. Yet few businesses calculate the full financial implications, which according to KW nutritionist Samuel Wellock could total more than 3.5ppl, adding up to a potential loss of £70,000 per year for a typical 200-cow herd. "Most UK herds need to improve their profitability, but as yields have been pushed higher, particularly in combination with the drive to cut feed costs, fertility has declined," he says. "It's a false economy if that extra milk or lower cost comes at the expense of fertility. The financial loss is just too great and will often outweigh any gains made elsewhere."

Unplanned culling

One of the biggest contributors to that cost is unplanned culling. A replacement heifer typically costs around £500 more than a cull cow is worth. And higher replacement rates reduce income from calf sales (fewer cows served to beef breeds), lower milk output (more heifers in milk), and reduce herd feed efficiency, because more nutrients are diverted into growth.

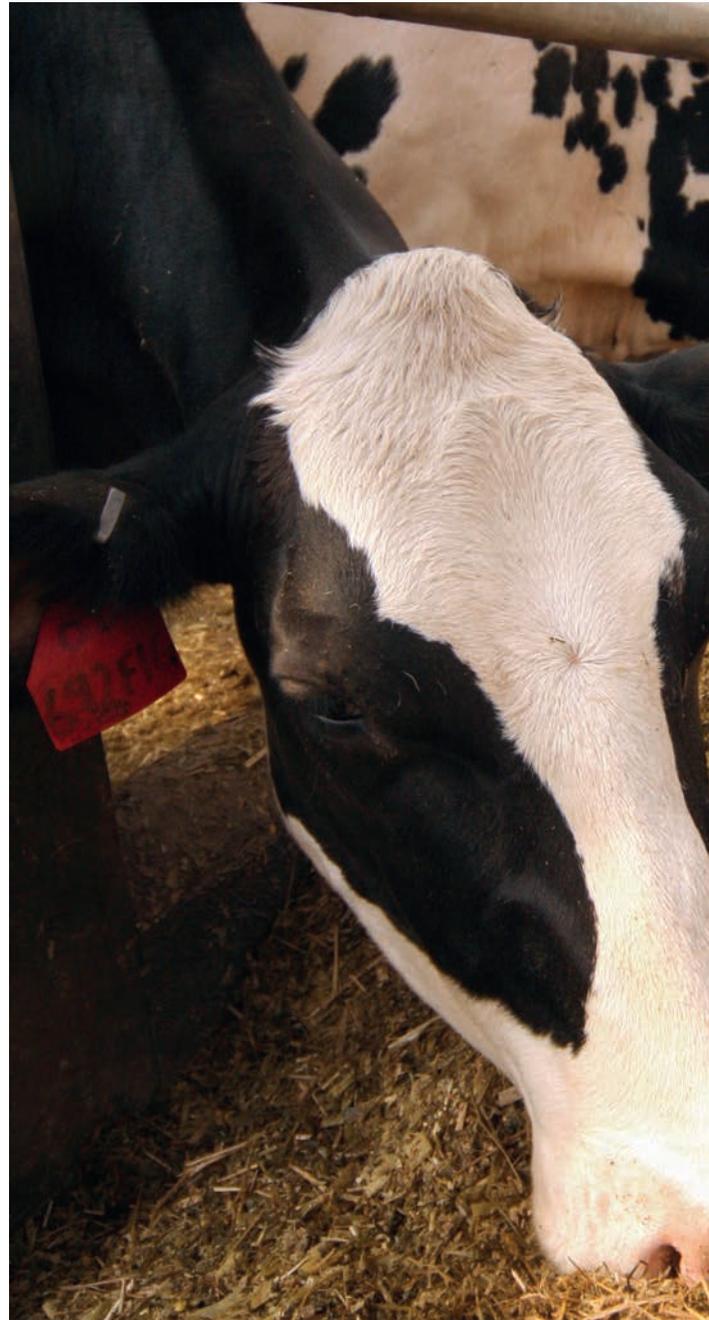
Insemination and vet costs will also be higher and, over time, either larger rearing facilities or more land will be needed to rear additional replacements.

"Less obvious expenses include disruption to the pattern of milk production – with potential implications for milk price and farm infrastructure – and more staff hours needed to handle the extra workload," Mr Wellock adds.

"On top of that, genetic gain is usually slower, with otherwise good cows culled early and lower yielders with good fertility remaining in the herd. More heifers entering the herd counter this to some extent, but a proportion of these will be lost within the first few lactations for the same reason."

Economic cost

Such costs can easily total £1,200 or more for each extra cow culled, according to Mr Wellock. For a 200-cow herd culling 20% due to poor fertility, rather than a more ideal 6%, those extra 28 culls could be costing more than £30,000 per year, or 1.5ppl. Costings are based on an annual yield average of 10,000 litres per



cow, 30ppl milk price. Further losses stem from a higher calving index (CI), and increased numbers of stale cows still milking.

Costing around £2.50 per cow per day, a CI that's 40 days higher than target (405 versus 365 days) adds another 1.0ppl, while a 500-litre per cow drop in annual yield (compared to lactation yield) due to the extended CI equates to around 1.5ppl.

"And that's not accounting for the loss in feed efficiency

rise in reproductive costs

of poor fertility



as stale milkers push more nutrients into body fat, or the additional health problems in early lactation that can result from overfat cows at calving,” he adds. “Together, total costs could easily be between 3.5ppl and 4.0ppl – at least. Although poor fertility is a concern on most dairy units, it’s not given the focus it deserves given this potential loss.”

Some of the greatest gains in fertility come from improved feeding, and particularly through managing

energy supply and minimising the peaks and troughs in body condition through the year. Except for early lactation, a body condition score (BCS) of between 2.75 and 3.00 can be achieved year-round with the right approach to feeding, according to Mr Wellock.

“A lot of focus is often put on the transition period. But failing to minimise the early-lactation BCS dip or fully support cows regaining condition in mid-lactation, as well as controlling fat levels in lower yielders in late lactation, can be just as damaging.”

And it’s in early lactation, when energy demands are highest and cows need to get back in calf, that the greatest impact can be achieved. Investment here, along with continued support until target body condition is regained, will improve fertility.

Energy intake

Mr Wellock’s advice is to focus on maximising energy intakes. Target a ration energy density of between 11.7 and 12.0 MJ ME/kg DM, using protected fats when needed to ensure cow energy requirements are met without overloading the rumen. “High quality mixed forages, along with moist and liquid feeds, will add palatability and encourage high intakes, another key factor in lifting energy supply.

“Feeds like wheat-gluten moist feed or draff will also help to create a good ration structure with plenty of openness. And liquid feeds minimise sorting by binding ration ingredients together. The results are a more consistent nutrient intake, better rumen function – improving energy supply to the cow – and a reduced risk of acidosis.”

Keeping fibre (NDF) levels up to between 32% and 35% is critical to support both rumen function and butterfat production, with soya hulls perhaps the best value non-moist feed option at present. “And aim for total starch-plus-sugars of between 18% and 24% of dry matter, using starch sources, like sodawheat, or a confectionery blend to keep the acidosis risk low.”

Feed should ideally be pushed up at least five times a day, and preferably split between two feeds, to ensure fresh feed is always available.

“In fact, anything that can be done to encourage the highest possible intakes is worth investigating, including reducing cow numbers to ease stocking density, tackling stress, cutting the time waiting to be milked, and improving access to the best quality forages.

“For some, reducing herd size to enable better support for the remaining cows has allowed feeding, fertility and overall profitability to be improved,” says Mr Wellock. “Individually, the various changes made might not seem significant, but added together they can have a substantial impact.” |