

# 'Ready reckoner' can revive margins

Cutting calving intervals can help to counter rising input costs

It is possible to meet increased production costs, with cash to spare, by reducing calving interval. We spoke to a vet and a nutritionist to find out more. Thompsons' Richard Moore and Pfizers' William Sherrard explain why three heads are better than one.

How many producers do you know who would willingly draw £145 in crisp new notes from a cash dispenser and set fire to them? Exactly. Yet the average 120-cow herd, with a typical calving interval of 425 days, is effectively doing this twice a week throughout the year.

Producers are concerned about escalating input costs, but channelling that concern into shortening your herd's calving interval could generate the money to pay those bills and even leave some cash to spare. That's the good news from Northern Ireland-based feed company J Thompson

& Sons' nutritionist Richard Moore. "To achieve this, a number of progressive and successful producers are working more closely with their nutritionists and vets than they were five years ago.

"When it comes to tackling the combination of factors that result in an extended calving interval, these progressive producers recognise that three heads really can be better than one," he says.

He's obtained figures from Bristol University vet Chris Hudson that suggest that many producers under-estimate just how much money there is to be made – or saved – by reducing calving interval. At a recent meeting organised by Pfizer Animal Health, Mr Hudson demonstrated a 'ready-reckoner' of the losses arising from longer calving intervals or, viewed the other way round, the gains available from shorter ones.

Taking into account all the relevant gains and losses at today's milk and feed prices (see Table 1), this shows a loss of £2.36 per cow for each day of an extended calving interval between 365 and 395 days. But the average calving interval for NMR-recorded herds is 425 days and, when the calculation is made again at calving intervals above 400 days, the losses increase considerably in steps of up to £7.40 per cow per year in herds with calving intervals above 486 days.

## Financial gain

So, as Table 2 shows, a 120-cow herd that reduces calving interval from the average of 425 days to 396 can add almost £15,000 per year onto the farm's bottom-line. By improving it further to a 385-day calving interval, which is being achieved in some well managed herds, the financial gain would rise to £18,000 a year. For herds with higher calving intervals than 425 days, the financial gain from reducing calving interval would be greater still.

"Reducing calving interval means improving herd fertility and there are several areas that must form the basis of a discussion with your nutritionist and vet before actions are taken," says Mr Moore.

	calving to conception interval range (days)				
	85-115	116-145	146-175	176-205	206-235
Corresponding calving index	365-395	396-425	426-455	456-485	486-515
Lactation extension per day CI extension (d)	1.00	0.7	0.4	0.1	0
Herd average 305d lactn	9000	9000	9000	9000	9000
Lost production from next lactation (l/d)	29.51	29.51	29.51	29.51	29.51
Gained production in this lactation (l/d)	19.94	12.96	6.89	1.6	0
Net loss of milk production (l/d)	9.57	16.54	22.61	27.9	29.51
Milk price (ppl)	26	26	26	26	26
Cost of lost milk production (£/d)	2.49	4.3	5.88	7.26	7.67
Concentrate feeding rate (kg/l milk)	0.30	0.3	0.3	0.3	0.3
Concentrate cost (£/tonne)	190	190	190	190	190
Cost of concentrate saved (£/d)	0.55	0.94	1.29	1.59	1.68
<b>Net loss per day (£/d)</b>	<b>1.94</b>	<b>3.36</b>	<b>4.59</b>	<b>5.66</b>	<b>5.99</b>
Value of average calf (£)	100	100	100	100	100
Cost of calf per day (£/d)	0.27	0.27	0.27	0.27	0.27
Cost of extra dry day (£/d)	0	0.3	0.6	0.9	1
Cos of calving pattern slip/seasonality (£/d)	0	0	0	0	0
Cost of extra serves and vet treatmts (£/d)	0.70	0.7	0.7	0.7	0.7
Gain by decreasing risk of calving-associated disease	0.43	0.43	0.43	0.43	0.43
Gain in yield in empty cows (£/d)	0.13	0.13	0.13	0.13	0.13
<b>Overall net loss per day (£/d)</b>	<b>2.36</b>	<b>4.07</b>	<b>5.6</b>	<b>6.98</b>	<b>7.4</b>

Table 1: Losses arising from extended calving intervals in 30-day steps from 365-395 days to 486-515 days

"Start by walking through your mid- to late-lactation cows and assessing body condition. This is the time to act if they're either too thin or too fat. Decide what to do in order to get them into 'fit but not fat' condition at drying off.

"And look at dry cow feeding. Dry cows need a highly palatable, high fibre feed to promote rumen fill," he says.

"Introduce some of the milking cow

ration before calving. If cows are in optimum body condition, their feed intake after calving will be maximised and early lactation weight loss minimised. This can have a huge impact on cow fertility."

As for the early lactation ration, producers should avoid an excessively high protein:energy ratio and too much rapidly digestible carbohydrate, although some

Table 2: Financial gains available from improvements in herd calving interval

	calving interval range (days)				
	365-395	396-425	426-455	456-485	486-515
Net loss per cow per day of extended CI (£)	2.36	4.07	5.60	6.98	7.40
Gain from 30-day reduction in CI (£/cow/year)	70.80	122.10	168.00	209.40	222.00
Annual gain in 120-cow herd from a 30-day CI reduction (£/year)	8,496	14,652	20,160	25,128	26,640
Gain from 60-day reduction in CI (£/cow/year)		290.10		431.40	
Annual gain in 120-cow herd from a 60-day CI reduction (£/year)		34,812		51,768	
		<Up to half of all herds are in this range>			

starch is needed as a bulking stimulus. "Make sure you include sufficient structural fibre and consider including live yeast and/or rumen buffers supplements.

Water troughs should also be cleaned out frequently and all cows should have enough access to be able to drink 100 litres each day.

"And make the commitment to keep better records and use them, with your vet and consultant, to help improve the farm's financial performance."

"As well as getting nutrition on track for better calving intervals, paying close attention to cow health in the first couple of weeks post-calving can also have a positive impact," says Pfizer livestock vet William Sherrard.

## Uterine infections

He urges producers to watch out for post-calving uterine infections. "Look for good rumen fill, vaginal discharge, overall demeanour, and take the temperature of freshly calved cows while they're milking for the first 10 days post-calving. All combine to provide a good early warning system."

With training and guidance from their vet, he says that producers and farm staff can learn to distinguish between the likely causes of a raised temperature – for example, early stage mastitis, respiratory disease or uterine infection – then intervene promptly and appropriately with either an intra-mammary treatment or a nil-milk-withhold injectable antibiotic.

Another strategy available to producers pursuing optimum herd fertility is oestrus synchronisation in mature cows and first-calved heifers. This involves using a progesterone insert on cycling cows not served within 24-days of being eligible following the post-calving waiting period, usually between 45 and 60 days.

"Groups of cows can, for example, have the device inserted on a Tuesday and then be given a luteolising injection the following Monday, with removal of the device the next day," says Mr Sherrard. "Oestrus can be expected to occur between the Wednesday and Saturday of that week, with the majority of heats being seen on the Thursday and Friday. This focuses the time when staff need to be vigilant in observing cows for heat."

Allison Matthews

