

Controlling heifer growth

Big savings when calving at 22-24 months

Heifer rearing costs are far more than farmers estimate.

Recent Kingshay data shows a Holstein Friesian calving at two years old costs £1,260, and this rises to £1,600 or more when calving at 30 months.

“This is a big increase on the £1,000 or less farmers completing our 2012 youngstock survey reckoned it was costing them,” says Kingshay managing director Duncan Forbes. “The survey also revealed the average age at first calving was 26 months, with a range from 20 to 48 months.”

Kingshay’s calculations use real costs, where possible, and include all feed, vet medicines, bedding, labour, water, interest on capital and allowing for mortality. The heifers are assumed to be reared on milk replacer, then concentrates and silage, and with two grazing seasons.

Target weights

“Our report shows that, compared with the 0.7kg daily gain required to calve at two years of age, a heifer growing at 0.6kg a day and calving at 30 months of age increased costs by £346/head to £1,606.

“And when a heifer is grown to a higher target weight than is necessary before service, growing at 0.7kg a day for an additional six months, the cost is £1,710,” says Mr Forbes.

“These costs show big financial savings are possible on many farms by moving to calving at the optimum of 22-24 months, when research shows the best average yield per day of life is achieved.

“But it’s vital to achieve target growth rates to ensure the best results, with maturity a more important factor than age.”

The main difference in costs between the three scenarios relates to feeding at £660 for calving at two years and £845, up to £940, for the two 30-month options.

Mr Forbes believes the main focus has to be feeding, but not in terms of reducing feed quality. “The aim must be to achieve target growth and maturity for service at 15 months of age. Then the animals will be unproductive for less time and the feed, and all other costs which increase because of a later calving age, would fall back into line.”

One of the main feeding concerns is avoiding heifers laying down too much fat, particularly around puberty from 12-15 months of age, explains Kingshay associate consultant Phil Clarke from P&L AgriConsulting.

“This results in too much fat laid down in the udder as it develops and limits potential lactation.”

Growth rates

Mr Clarke says the best way to achieve Holstein Friesian heifers with a well-grown frame and without excess fat is to push them to a growth rate of 0.9kg a day for their first six months of age and 0.7kg from then onwards.

“Research in the United States shows this accelerated growth is best achieved by a higher protein ration than is traditional here.

“I prefer to see heifers fed straw up to six months with a rearer nut of 18 to 21 per cent crude protein, which includes some soya.

“To rear heifers well and decide how much concentrate they need, weighing is vital,” says Mr Clarke. “It’s a good investment of time, when you achieve the most efficient growth rates.”

Kingshay’s youngstock survey revealed only 14 per cent of farms actually weigh their heifers at all.

Mr Clarke recommends weighing every three months, at least up to 12 months of age. “You can do six or eight out of a batch of 30-40 to get an idea, if that’s easier. Ideally weigh them, but a weighband will give a reasonable guide.”

From six months old, other forages can be fed when heifers are not out at grass, with crude protein levels slightly reduced.

“A mixed ration can include silage, maize or wholecrop and it’s best to continue with some chopped straw, but only when you can chop it below muzzle width, or they spend time sorting it out and intakes can suffer.

“To allow different groups of heifers to be fed varying levels of concentrate, often 1-2kg of rearer nuts are put on top of the mix, rather than in it.

“When not feeding a mixed ration, silage can be put in a trough and concentrate on top, as required, depending on silage quality and animal intakes.

“But it is important to offer hay or straw too in the trough or in a rack on all feeding systems. You can’t expect them to eat any extra roughage from their bedding,” says Mr Clarke.

When heifers are at grass, growth rates must be maintained. While many farms find it easy to achieve this feeding concentrates, sometimes through the whole grazing season, he says it is not necessary when paddock grazing high quality grass.

“Paddock grazing, moving heifers twice a week to fresh grass, can save a lot of concentrate. Grass should be shorter than for milking cows, ideally at 7-9cm. On the best quality grass growth rates can be 1.1kg a day,” he says.

Where's it most likely to go wrong?

According to consultant Phil Clarke, the first 36 hours of life are the most critical to achieving target growth rates for heifers.

“The calf needs good quality colostrum, so the cows need to be fed the right minerals during late pregnancy. The best farms ensure heifers receive two litres of colostrum in the hour after birth and another two litres at 6-8 hours old. You have got to milk the cow to do this, but it is worth the effort to ensure the calf has the immunity it needs in early life.”

Also ensure the protocol takes into account any animal disease issues, which should be discussed with your vet.