

Unruly teenagers – they don't need constant monitoring but they do need close supervision

One year on...

Yearling heifers are in urgent need of attention on many units as they're re-housed after one of the wettest summers on record. We spoke to a vet and some leading nutritionists to find out what producers can do to get them back on track and ready for first service and calving.

text Rachael Porter

A little small and lacking a bit of sunshine is how vet Debby Brown is seeing yearlings on some UK dairy units. But she admits that she's probably underestimating the serious impact that this summer's extreme weather has had on heifers that were turned out to pasture in the spring.

"It does vary from unit to unit, but I've not seen any spectacular heifers so far and on the whole they do seem to be coming off pasture in poorer condition than I've ever seen before," says Advanced Nutrition's Mrs Brown.

"Some heifers are coming in looking fit, but lacking in growth. That's not so bad – I think something can be done here to get them back on track in time for first service. But others are coming in looking extremely hairy and rough. They're thin and also lacking in growth and it's these heifers that I'm really worried about," she says.

"We're definitely looking at a couple of months in terms of lost growth, enough to delay service and to increase age at first calving. I think losing at least a month will be fairly typical this year."

So there's no time to waste and producers must find out where these heifers are in terms of their growth rates and then determine where they're aiming to be – and what's realistically possible given the current condition of their young stock.

Silage stocks and quality have the potential to compound heifer growth

problems. Mrs Brown urges producers not to feed poorer quality silage to heifers. "Nor should they feed them the very best – that's best fed to the milking herd. But find a compromise and make sure it's balanced with a good quality heifer cake or compound. You need plenty of protein in there to promote growth. Too much energy and the result could be excessive fat deposits in young heifers' udders.

"So pay close attention to nutrition – consult your nutritionist if needs be. Give your teenagers a balanced ration that will result in growth – some of it compensatory if they're short of their targets – but not too much condition."

Veterinary advice

Mrs Brown is also urging producers to be vigilant against parasites including liverfluke and lungworm – both thrive in the wet weather conditions seen this summer and pose a greater threat than they would in a typical year.

"So get some advice from your vet now on the best course of action, because parasites will also check growth rates and delay age at first calving even further."

Promar's Hayley Verney is also concerned, chiefly because many producers are not weighing heifers as they're re-housed to see exactly what the damage during the summer has been. "That's going to make the problem a lot worse. It's important that producers grasp the nettle on this one and find out where their young stock are, in terms of growth targets, and then implement a plan to try to claw some of that lost growth and potential back."

Looking at a simply growth curve and plotting their heifers against it will tell

them everything they need to know. "Divide their weight by the number of days old – it should give a growth rate of between 0.7 and 0.8kg per day. That's OK, but it won't always be good news," she says, adding that some will be closer to 0.6kg.

That said, that figure could be within the normal range on some units. "This monitoring needs to be done on a regular basis so you can benchmark your own heifers against the expected performance for your herd and unit.

Compensatory growth

If they're not looking good and growth rates are low, there has to be a degree of acceptance that service and first calving are going to be delayed. "There's only so much compensatory growth you can expect and it's critical to get weight right at first service – it needs to be around 55% of their mature body weight. That's between 350kg and 380kg, depending on the breed and size of your cows, and ideally between 13 and 15 months of age. Going past 15 months means that age at first calving is significantly compromised, particularly if they don't hold to that first service," says Miss Verney.

Volac's Georgina Cox says that some of the blame for the 'off target' growth rates in yearling heifers could be pinned on management prior to turnout last spring, or indeed prior to weaning.

"It's important to get it right from the start and to keep management and growth rates on track to reach the target of calving heifers as close to 24 months as possible," she says.

Few producers weigh calves at birth: "But if you don't weigh them, you don't have a start point and you're in the dark from day one.

"All calves should be weighed at birth and again at six months as an absolute minimum. Weighing at weaning is also recommended and this could coincide with other management practices, such as worming or vaccination, for a more efficient use of time and to minimise stress on the calf."

Ms Cox says that the only way to ensure calves are reaching targets, and to reduce variation between calves, is to regularly measure and monitor growth rates using weigh scales through a race or crush. "Alternatively, heart girth is closely correlated with weight, so measuring heart girth in centimetres, or using a weigh band, will provide a reliable measure."

"If heifer calves are failing to achieve the

Key steps to performance success

- Set a target age at first calving.
- Set a target weight at first calving – between 85% and 90% of mature body weight.
- Set a growth-rate target based on target age and weight at first calving.



Set targets and monitor them closely

Growth-rate targets need to be based on the target age and weight at first calving for your unit, according to Volac's Maggie Gould. "For example, if heifer replacements are targeted to calve at 24 months in order to increase their productive lifetime, then a 40kg calf at birth should reach 550kg body weight at calving – an average 0.7kg daily gain throughout her entire rearing period, or 510kg gain during 730 days," she says.

In practice, however, growth rates are inconsistent. A Royal Veterinary

College (RVC) survey on 19 dairy farms across southern England found that body weight gain ranged from 0.2kg to 1.3kg per calf per day during the first six months of life, a trend which has significant impact at 15 months resulting in animals reaching first service without adequate body size. The same RVC study recorded only 67% of heifers holding to first service and they required an average of 1.4 services per conception.

Heifers averaging 0.7kg daily gain throughout their entire rearing period

calved at between 23 and 25 months, an age that helped to increase their productive lifetime according to the RVC study.

The study concluded that these animals had significantly better fertility, higher milk yield per day of life, and improved longevity compared with those calving at more than 30 months of age. First service must start before 15 months of age and, therefore, target growth rates must be set to ensure heifers have adequate body size for first service at 13 months.

recommended weights in Table 2, and are too small at six months of age, then the following six points should be checked to identify the main cause for poor growth," adds Ms Cox.

She urges producers to go back to basics and look at colostrum management: "Remember 'quantity, quality, quickly, quietly'. And then look at milk feeding, particularly the type, amount and system being used to feed calves."

Housing, including ventilation, drainage, bedding, and pen design are also important. As is weaning management and post-weaning nutrition. And producers should also focus on vaccination and disease management.

"Corrective changes can then be made to ensure that all calves reach the target body weight and age at first service."

So, back to those yearlings. What can be done now if they're off target – can

they 'catch up'? Or is it a case of damage limitation?

"It very much depends on how far behind they are in terms of growth," says Provimi's US-based calf specialist Jim Quigley. "If producers are looking to increase their rate of gain to more than 1kg/day, this may result in fat deposition in the udder."

Fat deposition

"Once the heifers are confirmed pregnant, you can push them a little to gain more than 1kg per day, but body condition should be monitored carefully. Increase both protein and energy to minimise the risk of fat deposition," he advises.

He agrees that closely monitoring growth is vital to ensure that management is – and stays – on track.

Some US producers are using a tool called a hipometer. It measures the width of the hips (width at the hip joints at the point of the greater trochanters of the femurs) and uses this to estimate body weight.

"Research has shown that there is a close relationship between hip width and body weight. This tool is an excellent idea that's waiting for more producers to embrace it."

And with US producers waking up to the importance of 'targeted' heifer rearing, he says measuring is becoming routine on many units. "Fewer producers relegate their heifers to poor quality pasture. They understand that once a heifer is impaired, it is impaired for life. So greater care is being taken in early life management, with a focus on proper colostrum management and milk feeding.

"That said, producers could still do a better job in monitoring growth rates – both weight and height. Weighing calves every couple of months is optimal.

"And there is still a tendency to forget the pregnant heifers. Even though their nutrient requirements are proportionally less than other animals on the farm, they still need adequate intake of energy, protein, vitamins and minerals." |

