

Grazing heifers still require careful monitoring and management

Gone – and often forgotten

As grass quality begins to fall off in late summer, can you be sure that 'tomorrow's milkers' are getting the energy they need to keep growth rates and development on track?

We spoke to a leading heifer specialist to find out more.

text **Rachael Porter**

There's huge variation in how well heifers perform at grass and much of that is down to whether they – as well as grass growth and quality – are monitored and measured throughout the grazing season. So says Cargill's calf and heifer specialist Bianca Theeruth. "All too often I see heifers that are turned out to grass and left to get on with it," she says. "Many producers assume that the pre-puberty, puberty and pregnancy phases of heifer

development are relatively simple, compared to the 'tricky' pre and post weaning phases. And that at grazing their heifers will 'stay on target' with relatively little intervention.

"But the reality is that, without careful monitoring and good livestock husbandry and grassland management skills, the gains made during early calf rearing could be easily squandered during this period.

"It's certainly not an option to just turn out heifers in the spring and forget

about them until the autumn – particularly if 24-month-old calving is the target."

Learned behaviour

The potential for 'set backs' at turnout is huge. "Not only are heifers unaccustomed to their new-found freedom when they're turned out for the first time, but grazing is a learned behaviour.

"So try to keep heifers in a relatively sheltered area, close to farm, for two weeks before moving them further away," says Miss Theeruth. "And maintain concentrate intake at turnout to provide consistency for a few weeks and wean back once pasture intake is sufficient to meet energy demands."

It's important that heifers are 'transitioned gradually' onto the grazing diet to allow adaptation of the rumen: "Do not expect heifers to immediately graze enough to meet all their energy

Attention seekers: keep a close eye on growth rates when young heifers are out at grass





Bianca Theeruth: "Weighing heifers throughout the grazing season is vital"

requirements. And remember that young animals can be fussy grazers and intakes can vary considerably depending on weather conditions and grass quality."

Weight-gain targets

Not only is it possible to underfeed heifers during this phase, but it's also possible to overfeed them. Both scenarios will have a negative impact on future heifer performance. Miss Theeruth says that for heifers to hit the correct weight and size targets for 24-month-old calving, they require an average daily liveweight gain of between 750g and 850g throughout the rearing period. "There will be periods during the grazing season when even the best quality grass will not provide the energy levels to maintain the desired daily growth rates, so it is vital that producers assess the amount of energy available from grazing and that they buffer feed with concentrates when energy shortfalls are suspected."

Heifer rations should offer a crude protein content of between 16% and 18% at the start of the rearing period and this should fall to between 14% and 15% pre-calving. "Grazed grass can contain 20% or more crude protein and, in this instance, supplementation with high protein concentrates should be avoided."

She adds that if concentrate supplementation is not required to meet energy requirements then low protein, high digestible fibre products are

Heifer growth targets

Relevant targets expressed as percentage of mature animal weight/size:

- Puberty: between 45% and 50% mature body weight and 79% and 83% mature height

- Breeding: 55% mature body weight and 85% mature height
- Pre-calving: 95% mature body weight and 95% mature height
- Post-calving (seven days): 85% mature body weight and 95% mature height.

suitable to complement heifers at grass. "Dry matter intake is crucial for heifers at grass and can vary dramatically depending on the weather and time of year – so make sure you know the value of your grass and supplement accordingly.

"Remember that at 12 months of age – pre bulling – she will require 70MJ per day of energy in order to achieve an 800g per day average liveweight gain." Water is important too: "Ensure that heifers are physically able to drink from troughs – large troughs may be more suited to mature cows."

Monitor performance

The only way producers can ensure that heifers are getting enough energy and to keep growth on target is to monitor performance. "Weighing heifers throughout the grazing season, to ensure that they are on track to achieve growth targets prior to being brought in for winter, is essential.

"And regular monitoring enables supplementary feeding, which can be adapted to ensure heifers are provided with correct nutritional support while maximising grass intake."

Producers can measure either heifers' weight or height to check on growth. "The two correlate well between breeds, but there is less room for error by measuring weight," says Miss Theeruth. "So, if possible, invest in electronic scales to take the guess work out of heifer rearing and to help with benchmarking.

"Weighing can be incorporated with another routine husbandry, such as turn

out or worming, and the information can be used to assess nutrition and assist with dosing.

She adds that monitoring performance means that producers are better able to adjust the diet, if required.

"They can match concentrates with the dietary system – be that grazing, grass silage, straw, or maize silage – with the help of a nutritionist.

"Failure to achieve growth rates at grass can result in a delay to first service, which has a cumulative effect on the rest of the system. So it really is vital to monitor growth in this period."

Grazing system

Grassland management is important too. "If using a rotational system, then turn heifers onto pasture where sward height is between 8cm and 10cm and graze down to between 4cm and 5cm before moving them to the next paddock. "With set stocking, it's best to keep heifers in one area and aim for between 5cm and 6cm at turnout until May, between 6cm and 7cm in June and July, and between 7cm and 8cm from August through to rehousing."

It's also vital to 'match' stock type to the grazing system. "Young animals will avoid grazing certain areas for no apparent reason.

"This 'trait' will diminish with age, but I believe that young heifers benefit from rotational systems and are less likely to waste grass compared to older heifers on a set stocking system.

A leader/follower grazing system works best when the youngest heifer batch graze first with older heifers following behind.

As with heifer growth, it's also important to monitor grass coverage – ideally using a plate meter or sward stick – on a weekly basis.

"This allows producers to react to changes in growth quickly – measuring grass cover will highlight the amount of concentrate or forage required to buffer any shortfall and, ultimately, safeguard heifer growth." |

Table 1: Holstein heifer growth and feeding targets

age (months)	live weight (kg)	% of mature weight	target DMI (kg)	energy req. (MJ/d)	target CP %
3	120	18-20	3.5	35	18
6	190		5.0	47	16
12	330		8.0	70	14.5
14	375 bulling	55	8.6	76	14.5
18	465		10.2	90	14.5
24	625	95	11.7	110	15.5