

Managing replacement heifers this winter

The period between weaning and breeding is crucial if heifers are to successfully calve at two years of age.

While calving heifers at two years of age is recognised as having the potential to increase calf production over their lifetime - this relies wholeheartedly on managing those maiden heifers and first calvers well.

To achieve well-grown heifers at service it is crucial to analyse your winter forages and formulate rations accordingly to keep heifers growing steadily through the winter. Weighing heifers mid-winter will enable a check that liveweight targets are being achieved.



During the winter housing period it is important to:

- Calculate a target growth rate for this period
- Send off forage samples for nutritional analysis
- Formulate a ration to meet the animals' nutrient requirements
- Offer appropriate vitamin and mineral supplementation

The onset of puberty is largely determined by liveweight rather than age and therefore heifers should be managed to reach 65% of their mature weight at service. Assuming heifer calves grow at around 1kg/day while suckling their dam, subsequent growth rates to bulling need to be approximately 0.7-0.8kg/day, depending on breed type.

Maintaining a steady growth rate after weaning is crucial. The aim is to keep the heifers growing well without getting over-fat. For spring-born heifers, excessive growth rates during their first winter should be avoided (>1.2kg/day), particularly during the two to three months before they go outside. Heifers should not have any signs of patchy fat on the tail head and should be fed a high forage diet pre-turnout, so they can acclimatise to grazing as quickly as possible.

Average liveweight over winter	Target growth rate	Level of concentrates* required	
		Poor quality (DM = 20%, ME = 9.5MJ/ kg DM, CP = 10%)	Good quality (DM = 30%, ME = 11.5MJ/ kg DM, CP = 16%)
300kg	0.8kg	3.7	1.9
	1.0kg	N/A	3.2
400kg	0.8kg	4.1	1.2
	1.0kg	N/A	2.9

Table 1: Concentrate feed rates for spring-born heifer calves fed different quality silages

*Assuming concentrate value of 12.5 MJ ME/kg DM and 12% CP in the DM. N/A = Not achievable with a minimum of 45% long roughage in DM

If concentrates are fed at more than 0.5kg per 100kg liveweight (LW), they should be given in two feeds per day. Quantities above 4kg per day should include a source of digestible fibre such as sugar beet pulp.

Fibre is also an important source of energy in ruminant diets as well as being key to efficient rumen function. Long fibre has a physical effect in the rumen stimulating rumination and chewing. Forage-based rations will usually provide sufficient structural fibre for good rumen function, however, intensive cereal-based rations that are fed ad-lib will require supplementary long structural fibre. The best type of forage for this is straw as it is rougher and small amounts will help maintain rumen function compared to softer silage or hay.

For further information read the BRP manual [Managing replacement heifers for Better Returns](#)