

By Rhidian Jones SAC Consulting  
Finishing heifers

## Introduction

Heifer systems provide beef farmers with a lot of flexibility whether they are homebred or purchased. They can be sold at various stages including store, bulling, in-calf or with a calf at foot. In addition they can be finished on a system appropriate to their breed and type. This document will look at the options for finishing heifers. While heifers will not attain the carcass weights of bulls or steers they are generally cheaper to purchase so as long as an appropriate system is chosen that will allow them to maximise their potential good margins can be made. Pushing heifers too much too soon can lead to them laying down fat before acceptable weights are achieved so the importance of the growth phase will be emphasised. Large framed continental cross heifers do have genetic potential these days to reach far higher finished weights than was traditionally recommended. Charolais cross heifers from continental cross cows for example can reach finished weights of 600-640kg LW at 20-21 months of age, grading at R4L.

## Source and type

Heifers can either be beef-bred from suckler cows or dairy-bred crosses. Beef-bred heifers will predominantly be born either in spring or autumn which help to dictate a suitable system, while dairy crosses may be born at any time of year. The breed or type will also dictate a suitable system – larger-framed types (generally continentals) will be later maturing, so will grow faster and to heavier weights while smaller-framed types (generally native breeds) will be slower growing and will not be so heavy at slaughter. There are a very wide range of cattle types as well as individual Estimated Breeding Values (EBVs) to consider. Generally it will be more efficient if cattle are managed in even batches for type, breed, liveweight etc so that nutrition and other inputs can be tailored to each group rather than having cattle of all sorts and sizes in a group.

## Phases of Growth

Cattle have three growth phases, the rearing phase (birth until weaning), growing phase and the finishing phase. Due to the fact that heifers will lay down fat earlier than steers the growing phase is crucial to allow heifers to reach their full potential and achieve acceptable carcass weights. Depending on the type/frame size of the animal the liveweight gain in the growing phase should be limited to between 0.6 and 0.8kg/hd/day. The diet during this growing phase should be 15-16% CP and 10.5-11.5 MJ/kg DM for energy. In addition, growing rations should be high in structural fibre (eg straw) and digestible fibre and contain good levels of minerals and vitamins and have a low starch content. Heifers, especially easy fleshed types, are often best left for longer on a growing ration to grow sufficient size before the final finishing period. The final finishing period can be shorter than for steers but will be similar in content with a CP% of 12-15% and ME of 12 MJ/kg DM and >30% starch.

## Other factors affecting finishing heifers

Heifers will have a slightly lower killing-out percentage than bulls and steers due to the variation between the growth of tissues. For example, heifers have increased levels of internal fat and udder development may also be a factor. While heifers are considered to be less efficient than bulls and steers (liveweight gain & food conversion ration) it must be remembered that as they are smaller they will have lower maintenance requirements which offsets this effect to some extent. Also be aware that from 13-14 months of age there may be some bulling activity that will affect feeding/grazing of the animal itself and others that may be mounting. As with any efficient production system set targets and monitor regularly by weighing stock. Forages must be analysed and rations compiled accordingly.

## Grass finishing

Grass finishing is particularly suited to spring-born heifers of all types. Native breeds can finish off grass by 17-18 months of age at 500kg LW (260kg DW) with some concentrates fed in late summer. More extensive systems may house them for finishing. Continental crosses will require some feeding of cereals at grass to finish at 550kg LW (290kg DW) by 19-20 months of age.

Autumn-born continental heifers would benefit from rotational grazing to grow good frame during their first grazing season before being housed for finishing. Some extensive systems with native breeds may even have a second grazing season to finish the cattle off grass at 22-24 months of age.

## Summary

The breed type of the heifer will dictate the most appropriate production system. Large-framed types (typically later maturing continentals) will grow faster and finish at heavier weights while smaller-framed heifers will be slower growing and finish at lighter weights. These smaller-framed types therefore warrant a longer growing phase with reduced lifetime daily liveweight gain (DLWG) to ensure they still achieve acceptable weights.

## Further information

More information on finishing heifers can be found in the EBLEX publications

- Feeding growing and finishing cattle for Better Returns
- Beef Action for profit 2: Better Returns from continental cross heifers
- Beef Action for profit 14: Better Returns from native breed finishing

Table 1: Typical weights and target growth rates

	Small framed	Medium framed	Large framed
<b>Overall DLWG kg/hd/day</b>	0.8	0.9	1.0
<b>Finish liveweight kg</b>	500	550	600
<b>Finish deadweight kg</b>	270	300	340

Table 2: Typical diets and DLWGs for housed period

Liveweight	Feed <i>adlib</i> silage + barley	Small framed Kg/hd/day	Medium framed Kg/hd/day	Large framed Kg/hd/day
<b>300kg</b>	Silage + 2.8kg	0.7	0.8	0.9
<b>400kg</b>	Silage + 3.5kg	0.8	0.9	1.0
<b>500kg</b>	Silage + 4.8kg	0.9	1.0	1.1

Silage is 24% DM, 10.6 ME and 13% CP