

By Debby Brown

Managing replacement heifers for service this spring

- Replacement heifers are the lifeblood of suckler herds and offer a valuable opportunity to bring in new genetics and improve herd productivity, so selecting and managing them well is crucial
- Main considerations:
 - o Homebred or Bought in?
 - o Disease risk – know their disease status
 - o Vaccination status
 - o Size and weight
 - o Body condition
 - o Bull or AI
 - o Lameness/other health issues
 - o Nutrition
- Purchased heifers present a higher risk of bringing in disease to the herd than homebred heifers, depending on the health status of the herd. If buying-in heifers for service in the spring, then consider the timing of purchase to allow time for mixing, vaccinations, testing etc. Any change in nutrition, social group or environment is a possible stress and may impact on fertility
- What are the main disease risks within the herd? Johnes, BVD, Lepto, IBR? Ensure any testing required on the farm has been carried out well in advance of the service period to avoid problem heifers being kept that may potentially affect fertility of other heifers in the group
- Are cattle vaccinated for BVD, Lepto or IBR in the herd? If so, heifers need to have completed their vaccinations at least 4 weeks prior to service. It is too much to ask these heifers to mount an immune response to vaccines as well as conceiving to service at the same time
- Select homebred heifers based on their growth rate to weaning, structural soundness, temperament and liveweight relative to target for the service period. Heifers born early in the calving period are usually the best heifers for replacements because they are well grown and likely to reach the target service weight
- How big are the heifers compared to the adult cows? They should be 65% mature bodyweight at the start of the breeding season but consider height/frame size as well as weight (see Table 1)
- Heifers that are too fat at service will be harder to get in calf. It is better to keep them leaner rather than fatter at this time and allow for some increase in the level of feeding towards service. Leaner heifers have less liver problems and are usually more fertile, although still require good levels of nutrition

- Consideration needs to be given to whether heifers will be served by artificial insemination (AI) or put to a bull. If using AI then it is important to discuss the different synchronization program options with your vet well in advance. Planning and attention to detail will be key to achieving good conception rates. Bull options also need considering well in advance to give opportunity to select a suitable sire for your herd. Ensure the semen that is chosen is from a bull that has good EBVs for calving ease – direct. If a bull is to be purchased for use on heifers then it needs to be sourced at least 3 months before the mating period to allow for acclimatisation and health and fertility testing to be carried out
- All breeding cattle should be checked pre-mating and treated if there are any issues with lameness, worms, fluke etc to allow full recovery before service, again giving the best chance for conception
- Diets should be optimised to ensure good continuous growth and fertility of heifers. The target should be for lean growth and a body condition score of approximately 2.5-3 at calving. Use good quality forage and good quality protein and energy sources. Increase the plane of nutrition gradually towards service period and minimise stresses and changes in management. Also consider mineral and vitamin requirements to help fertility, eg manganese, selenium, iodine etc

Table 1: Target weights for replacement heifers

To have the best chance of heifers conceiving during the target service period and at regular yearly intervals after that, they should be managed to reach target weights at key points.

The targets are expressed relative to mature cow weight, so it is important that accurate mature cow weights are used to calculate them.

Mature cow weight	Growth rate from birth to first service ¹ (kg/day)	First service	Start of second breeding season	Start of third breeding season
% of mature weight		65	85	95
		Target weight for replacement heifers (kg)		
600kg	0.80	390	510	570
650kg	0.85	423	553	618
700kg	0.90	455	595	665

¹ assuming first service at 15 months of age