

Replacement heifers – Your dairy cow of the future

As the future of your dairy herd, replacement heifer management is key to the future performance of your herd. Therefore, a large emphasis should be put on replacement heifer management. The plan should be to:

- 1) Manage heifers well to ensure calving at 2 years of age
- 2) Rear plenty of them
- 3) Make sure that heifers entering the herd have the highest EBI possible

1) Manage heifers well to ensure calving at 2 years of age.

The objective on every dairy farm should be to rear heifers to enter the herd at the correct weight and age to achieve the best production and fertility performance. Numerous studies in Ireland and abroad have shown that calving heifers at two years old improves lifetime performance and reduces rearing costs. Therefore, it is essential to establish clear targets for your heifer rearing and monitor performance closely over the rearing period. The aim for your 2014 dairy calves is to have them submitted for service in late April/early May 2015 - less than 10 months from now! Weight rather than age determines when puberty occurs and oestrus cycles begin. Therefore, it is important to assess the 2014 calves' performance to date to ensure they will reach the correct weight come next May. These calves should be weighted within the next month to assess heifer growth rates. The target weights at various stages of the rearing process are outlined in Table 1.

Breed	Age	Age	Age	Age
	6 months	9 months (at housing)	15 months (breeding)	24 months (precalving)
Holstein Fr	165	220	330	530 - 550
Nz Fr	155	210	315	525
Jersey/ Hol Fr Cross	145	195	295	490

If heifers are behind target it is important to look for the causes of poor growth. High quality grass, good parasite control and targeted meal feeding are key to good weight gain. Any heifers behind target now should be separated from the main group and fed accordingly. Now is the time to take corrective action - do not wait until next spring.

2) Rear plenty of them

Many Lakeland farmers are planning to expand cow numbers in the years ahead, but where are these extra cows going to come from? Are they going to have to be bought in or will be reared on farm? ICBF data for Lakeland farms in 2013 shows only 26 dairy heifer calves were born per 100 cows and only 13 per 100 were bred from dairy AI- this will not be enough to achieve the targeted expansion in many cases

The target should be to rear 35-40 heifers per 100 cows to facilitate expansion, and 25 heifers per 100 cows for established herds. Research has shown to get a heifer on the ground will require 5.5 conventional AI straws. Therefore for a herd of 100 cows aiming to rear 40 heifers, 220 AI straws will have to be used or just over 2 AI straws per cow. With the replacement heifers being the best genetics in the herd, 6wks of AI should be used on the heifers. It is therefore important to assess the quantity of replacement stock on farm and determine will this be adequate to maintain current herd size or to facilitate expansion. If not, breeding strategy for the next breeding season needs to be assessed.

3) Make sure the heifers entering the herd have the highest EBI possible

Getting heifers from birth to calving is a large investment on any farm and to get the greatest return on the investment the quality of stock needs to be the best possible. As mentioned before there are only 13 AI-bred heifers born per 100 cows in the Lakeland region. This indicates that there is massive scope to improve the genetic potential of the replacement heifers on Lakeland farms. Using AI gives the farmer access to the best genetics available and by selecting the right team of AI bulls the genetic potential of the herd will increase. The herd should be bred focusing on the highest EBI bulls available. This will result in increased milk solids production and increased survivability. The target AI figures are outlined in table 2. Remember, it is preferable to breed your own replacement heifers to keep disease risk low, but where purchase is required, insist on EBI figures for the seller's herd before purchasing. We would suggest that a minimum standard of €150 EBI for purchased dairy heifers.

EBI targets for bull selection	
EBI	€250 or higher
Fertility	€120
Milk solids	+30kgs
F%	+0.11
P%	+0.13

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