

Calving beef heifers at 24 months of age

As we strive to make our suckler herds more sustainable by reducing our costs and our carbon footprint, there is one area that many farmers fail to target: age at first calving

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Why calve beef heifers at 24 months? You'll have:

- More calves from each heifer over her lifetime.
- Reduced stocking rate compared with calving heifers at older ages.
- The potential to reduce the number of stock groups.
- Reduced costs – research at Teagasc Grange shows that for a 50-cow herd with a 20% replacement rate, each additional month that calving is delayed costs €490 or €50/heifer per month.

Irish replacement heifers are currently averaging 31/32 months at first calving. Nationally, the target is to try to calve heifers at 24 months. Currently, only 24% are calving at 24 to 26 months, admittedly that's up from 18% four years ago.

Why are farmers reluctant to try it?
When asked at discussion group meetings as to why heifers are not calved at 24 months you typically get a number of reasons:

- Heifers aren't sufficiently well-grown at 15 months for bulling.
- It will stunt the heifers growth if they are bullied too early.
- They are too difficult to calve.
- They won't go back in calve again as second calvers.

Heifers are not that saleable if things go wrong during calving. Herds that do calf at 24 months seem to do so consistently which suggests to me that it is achievable if you set your mind to do it. Many of the arguments for not calving at 24 months are plausible but Table 1 dispels some of the arguments even if we do concede that heifers, irrespective of their age, will need more assistance at calving.

Table 1 shows that heifers that calved at 23-26 months had as good a calving interval, and calved down as soon again as a second calver, as heifers calving down in the older categories.

The figures show that younger heifers do have slightly higher calf mortality. Heifers, irrespective of age, will be more difficult to calve and as the figures show will need assistance at calving. This could be reduced if we were more selective in the sires we put on heifers.

Even the younger calving heifers are being mated with sires with an average calving difficulty of 4.7%. Interestingly, our dairy counterparts try to mate their heifers calving down at two years with sires with a calving difficulty of 2% or less. We may never drop that low on the beef side but aim for 4% calving difficulty or less on heifers.

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Table 1: Replacement females born in 2011 (ICBF figures total = 131,077)

Age at first calving (mths)	Avg calving interval Overall (days)	% Calving for a Second time	Avg calving difficulty of bulls used on heifers	Heifers Calving unassisted (%)	Mortality at first calving (%)	Reaching fifth parity (%)
23-26mths	383 days	82%	4.7%	50%	3.2%	39%
27-30 mths	394 days	83%	5.1%	53%	2.8%	20%
31-35 mths	392 days	87%	5.2%	58%	2.6%	4%
36 40 mths	386 days	86%	5.2%	57%	2.0%	0%

Tips to achieve 24-month-old calving

1 Identify your replacements early: monitor all of your potential replacements as calves. By weaning time you should have identified the best performing heifers from your best cows and that have been sired by bulls that have good maternal traits.

2 Feed appropriately over-first winter: heifers should be 280kg to 320kg at weaning, which means that you will need them gaining a minimum of 60kg to 80kg over their first winter if you want them to reach the target bulling weight at 15 months. Depending on your silage quality, this means that you will need 1kg to 3kg of a good-quality weaning ration/head/day over the winter to achieve 0.6kg gain/day.

Table 2 shows some of the key target weights needed at the various stages for 24-month-old calving.

3 60% of mature weight at bulling: if your mature cow weight is 700kg you will need your heifers to be around 420kg at bulling. Much lighter than this may mean some of the heifers are not cycling at the start of breeding. Heifers that are too light at bulling may well go in calf but they could struggle as first calvers to go back in calve again.

4 Calving ease of sire used: this is really a critical point irrespective of what breed you choose to use on your heifers. Selecting an AI or a stock bull with proven ease of calving is paramount. The target is to get these young heifers calved safely and give them every chance to go back in calve again as first calvers. Ideally, select bulls with a proven calving difficulty of 4% or less. Using a young bull with low calving reliability is high risk in

this type of system.

5 Pre- and post-calving care: Once successfully bred, heifers need to be well managed to achieve 80% of their mature weight by the time of calving. So if they average at least 0.6kg/day throughout pregnancy they should easily achieve this target. Monitor heifer body condition to ensure they are fit, not fat, at calving.

The statistics clearly show that we

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need to be particularly vigilant at calving. Between 50% and 60% of heifers will need some level of assistance at calving.

Once calved, don't allow heifers to lose condition. A rapid turn out to grass after calving will help with this. Heifers that remain indoors for a month or more after calving should be supplemented with at least 2kg of concentrate/day on good silage. This will help to avoid excessive weight loss, which would delay their return to cycling and then rebreeding.

We could clearly be getting more of our suckler heifers to calve at 24 months. If it is to be achieved there are targets that need to be met regarding the weight of heifers at weaning, breeding and calving. We need to be extremely mindful of our sire selection to avoid calving difficulty.

If we are continually improving the heifers coming into the herd it makes absolute sense to get them into the herd as early as possible and give them every chance to stay there.

Table 2: Key weight targets

Mature cow weight	Weaning weight	Bulling weight	Calving weight
Target % of mature wt		60%	80%
600kg	260-280kg	360kg	480kg
700kg	300-320kg	420kg	560kg