

Measuring the growth rate of youngstock provides useful information on how well they are growing. It is also an indirect method of monitoring the efficiency of feed conversion. Meeting growth rate targets ensures maximum return on your investment.

## Benefits of monitoring growth

- Achieve target growth rates for breeding
- Identify underperforming and sick calves

Growth is at its most efficient in the first 2 months of life so high growth rates should be targeted during milk feeding.

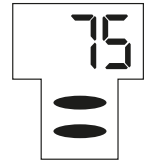
- Identify problems within your system (eg suboptimal environment)
- Maximise growth efficiency cost effectively

Monitoring growth from birth can guide continual management improvements to ensure that every heifer is in calf by 15 months of age.

## Monitor growth by weight or height

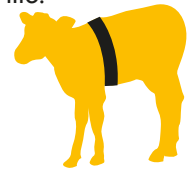
### Weight

Electronic scales are the most accurate method of determining weight.



A set of weight bars with a strong platform will suffice. Using this in combination with a race will be good training for handling in later life.

A weigh band can be used to estimate weight.



This is placed around the chest of the calf behind the front leg and shoulder blade – it must be placed flat against the skin and held at a consistent tightness ensuring it is not twisted.

### Height

Height can be measured using a height stick placed across the withers or rump while the animal is standing on a flat surface.

Alternatively, you could make use of fixed height markers on the wall of the rearing building – if these are used it is important to account for any change in bedding height that may occur.

## When

A growth rate can only be calculated when at least two measurements have been made.

Birthweight of the calf should be recorded as this will create a baseline figure to calculate the average daily gain, ADG (also known as daily liveweight gain, DLWG).

- Regular measuring can be combined with other tasks such as vaccination or dehorning to make effective use of time

Then again as regularly as possible, including

- Weaning
- 1 week post-weaning
- 6 months of age
- At breeding

Taking a measurement at 6 months of age allows time for corrective measures prior to breeding.

### Calculating ADG

$$\text{ADG} = \frac{\text{latest recording} - \text{earliest weight recording}}{\text{Number of days between weighs}}$$

### Example

A calf has a birth weight of 38kg, at weighing a month later it weighs 62.5kg. To calculate the average daily gain, the figures are used in the above calculation as shown below.

$$\frac{62.5 - 38}{31} = 0.79$$

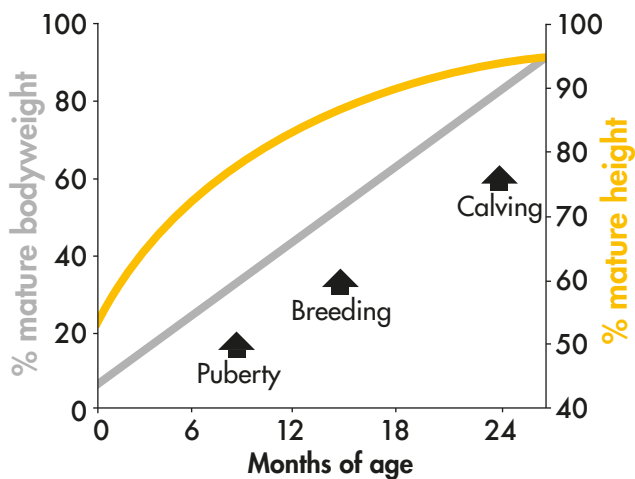
## Targets

The key to successfully rearing heifers for a 24-month calving is to maximise weight gain without creating over-fat heifers.

Research and experience confirm that heifer growth rates are best set as a percentage of mature weight or size.

**It is important to base your targets on a percentage of mature size (weight or height) of a number of 2nd and 3rd lactation cows within the herd.**

Target % differs for bodyweight and height as shown in the graph below.



Remember, it does not matter which method you use to monitor growth as long as you take regular measurements from your own animals using the same method each time. This allows you to benchmark your herd performance between groups.

### Example

For a herd with an average mature bodyweight of 660kg, the target growth rate at different stages of growth is set out in the table below.

If you find that growth rates are too low overall then you should consult your nutritionist or vet for advice.

Age*	Stage	Body weight (kg)	Growth rate (kg/d)	% of mature weight	% of mature height
0	Birth	40			
3	Post-weaning	110	0.78	17%	63%
6		183	0.81	25%	74%
14	Pre-breeding	363	0.77	55%	87%
24	Pre-calving	594	0.70	90 %	96%

\*months

For more information on calf management, please visit: [www.dairyco.org.uk/calves](http://www.dairyco.org.uk/calves)

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