

Beef production from the dairy herd

Opportunities to beef up returns



Calves for beef production – a beef-cross calf is worth over £180 more than a dairy bull from the same cow

Cull cows – marketing cull cows at the correct level of fatness can increase returns by up to £30/head

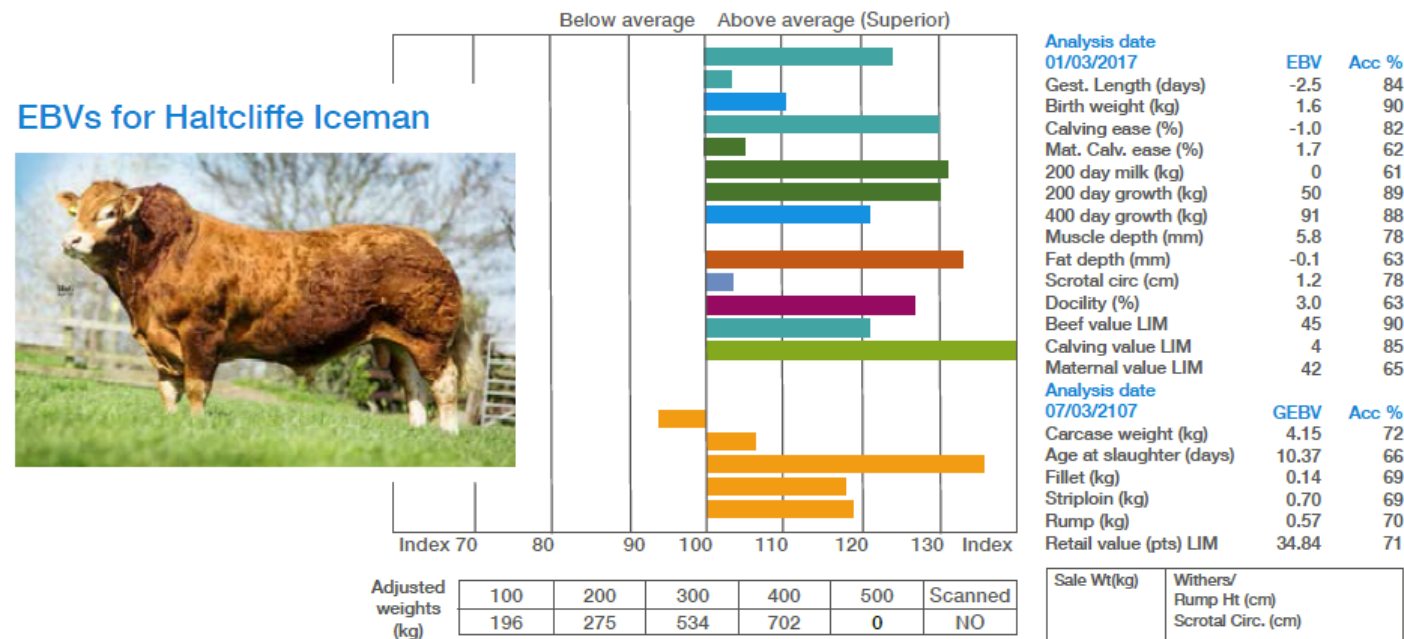
Fitting beef into the dairy herd – use high genetic merit animals for replacements and lower genetic merit animals for beef production

Use of sexed semen – use sexed semen to focus breeding replacements from fewer, better cows

Breeding potential – use EBVs to select for the right genetics rather than relying on visual assessment

Presentation of EBVs

- Estimated breeding values are often presented on charts to make it easy to assess a bull's genetic strengths and weaknesses
 - Bars that lie to the right of the central line indicate the EBV is above breed average. The further to the right, the better
 - Bars that lie to the left of the central line indicate the EBV is below breed average.



Meeting marketing needs

- EBVs for calving ease, growth and carcass traits must be the focus when buying a beef bull or AI sire
- Calving traits – look for positive calving ease figures and negative figures for birth weight and gestation length
- Growth and carcass traits – when breeding calves from the dairy herd it's important to think about growth rates and carcass traits to hit market specification. Do not select on growth rates alone – remember calving ease and gestation length!

Birth weight EBV (kg)	Calving ease – direct EBV	Gestation length EBV
<p>Identifies bulls that will produce smaller calves at birth.</p>	<p>Identifies bulls whose progeny will be born without assistance.</p>	<p>Identifies bulls whose calves are born without extended gestation length.</p>
<p>Example A bull with an EBV of -4kg is estimated to produce calves with birth weights 2kg lighter than a bull with an EBV of 0.</p>	<p>Example A bull with an EBV of 6 is estimated to produce 3% more unassisted calvings compared to a bull with an EBV of 0.</p>	<p>Example A bull with an EBV of -6 will produce calves with gestation lengths 3 days shorter than a bull with an EBV of 0.</p>

Investing in the right genetics

- Beef sweeper bulls are often used in dairy herds and are not of high genetic merit so don't produce quality calves
- Unless investment is made in a stock bull with superior EBVs, his offspring is likely to have lower growth rates, poorer carcass quality and more difficult calvings than an AI sire

Investment in quality genetics can return up to £42/calf!!

Start with the right calf



Lifetime productivity of a calf relies on it getting a good start early on in life.

Remember the 3 Q's on colostrum:

- 1. Quantity** – 3 litres within 2 hours of birth, followed by a second, similar-sized feed within 6-12 hours
- 2. Quality** - contains at least 50g/litre of immunoglobulin IgG , measured using a colostrometer
- 3. Quickly** - within two hours of birth. Absorption of immunoglobulins progressively declines after birth

Start with the right calf

Calf rearers should also focus on the above points when buying calves. Avoid buying calves that have:

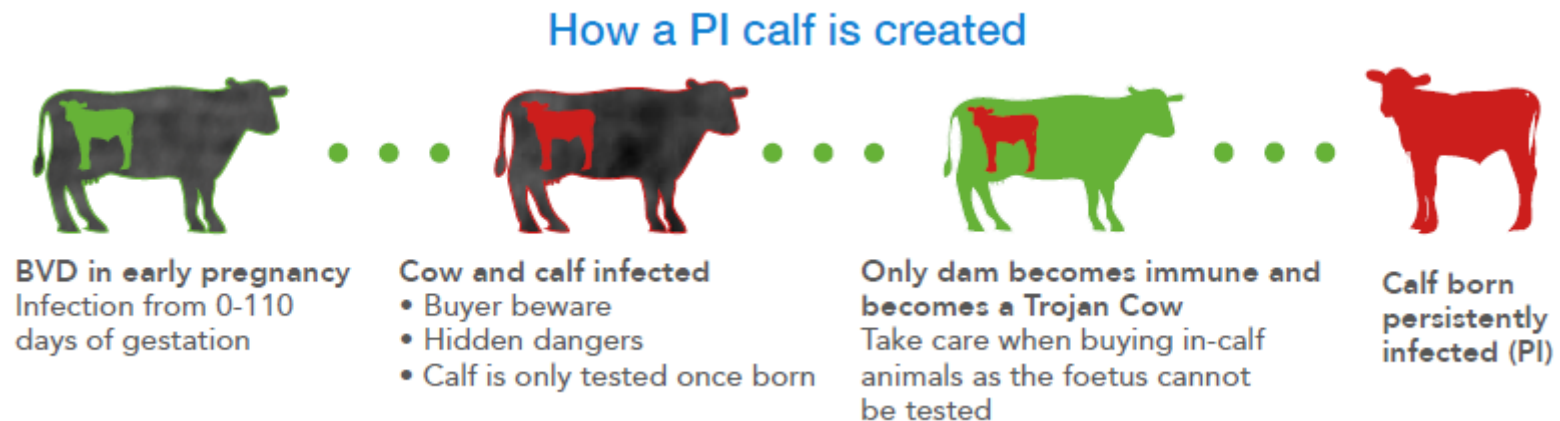
- Diarrhoea
- Discharge from the mouth, nose or eyes
- Trouble breathing
- A listless appearance or dull coat

Dairy farmers should aim for calves to:

- Receive adequate colostrum
- Be of known disease status
- Grow well
- Have a dry navel
- Be bright-eyed and alert
- Show reasonable conformation

Optimizing calf health

- Source calves that have had good colostrum intake, are from a high health status dairy herd and check the calf for signs of ill health
- Minimize spreading disease on the farm by running an “all in-all out” system, keep calves away from other livestock and practice very good hygiene
- Testing calves for BVD is a good investment as buyers are often willing to pay a premium to know a calf isn't persistently infected (PI)



Early life nutrition



Nutrition fuels growth, immunity and rumen development during the early stages of life.

Milk replacers

- Milk replacers are the mainstay of most calf rearing enterprises
- Choose a product and feeding system that delivers growth rates

Impact of environment

- Calves less than 3 weeks old are vulnerable to temperature changes. At less than 15 degrees, extra feed and warmth needs to be provided
- At 3 weeks and older, calves may still require extra feed and warmth at temperature below 10 degrees

Weaning



- Good management at weaning is important for maintaining growth rates and minimizing disease
- Calves can be considered ready to wean when they are consuming 1.5kg/head of high-quality starter feed a day
- Post-weaning calves should be fed straw as the forage component in the ration and transitioned slowly to silage when they are around five to six months of age

Growth targets:

- >0.8kg/day from birth to weaning
- >1.1kg/day from weaning to end of rearing

Calf housing and hygiene

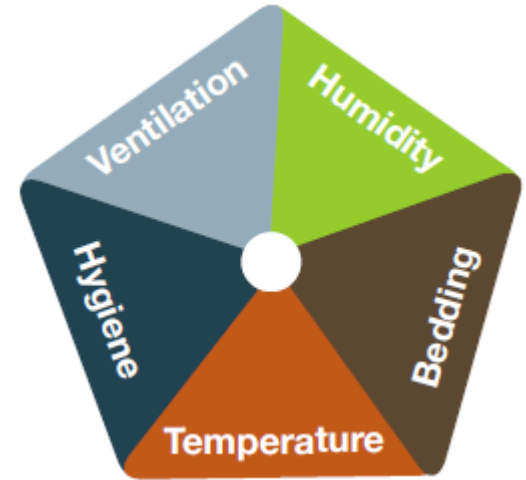
There are five crucial factors affecting the calf's environment

Ventilation

- A constant supply of fresh air is essential in calf housing to prevent diseases
- Mechanical ventilation can be used where natural ventilation cannot be achieved

Bedding

- It is essential to provide clean, dry bedding to prevent contact between the calf and floor or soiled straw and to provide thermal comfort
- The calf's legs should not be visible when lying down



Calf housing and hygiene



Humidity

- Control of moisture through ventilation and drainage is essential as dampness has a negative impact on calf performance

Hygiene

- Housing must be dry, clean, cleanable, free from draughts and good hygiene must be practised to allow calves' to maximise their performance

Temperature

- Newborn calves feel cold when the temperature is between 10-15 degrees and will use energy to keep warm rather than grow. Consider adapting their milk intake, calf jackets and heat lamps
- Calves become heat stressed at temperatures above 25 degrees and use energy to keep cool rather than grow

Transition management



Transition management is the time when a beef animal goes through a significant period of change such as moving from a growing ration to a finishing ration. If not managed well, this can result in a period of reduced growth rate.

- New rations should be introduced gradually over two weeks
- Large amounts of concentrates should be introduced over more than two weeks
- If feeding from a trough, the ration should be fed in two meals a day
- Fresh, clean straw should be provided in racks during transition to ad-lib cereal
- Avoid stress from mixing with new cattle, allow time to settle and minimize competition

Growing rations

- Growing beef cattle must be fed to achieve steady, continuous growth
- Growing animals thrive on high levels of good quality forage
- Growing rations are usually forage-based, such as grazed grass, silage whole crop straw or a combination

Finishing rations

- Feeding finishing rations relies on a short period of maximum liveweight gain
- The switch from a growing ration to a finishing ration happens to facilitate the last 100-240kg of liveweight gain
- Finishing diets are energy dense, containing foods rich in starch

Finishing cull cows

The best potential to finishing cull cows profitably is to either:

- Finish dry cows at grass
- Finish cows in late lactation and dry them off rapidly before slaughter

Pointers for finishing cull cows:

- Use pregnancy diagnosis to ensure cows are not pregnant
- Drying off must be rapid as it can lead to weight loss
- Young cows have higher feed-conversion efficiencies
- Aim to finish cows in less than 3 months, with growth rates of at least 0.9kg/per day