

Better Returns from calf rearing



Sourcing the right calves

- Buy calves that are:
- Known to have received adequate colostrum at birth
- Of known disease status
- Seven days old or more
- Well-grown for their age (50kg at 2 weeks old)
- Healthy with a dry navel
- Alert and bright-eyed



Checks on arrival

Transport can be very stressful increasing disease risk.

- Offer 2 litres of warm electrolytes on arrival
- Offer milk the next day
- If other cattle are on the farm, quarantine incoming calves for 7 days
- If BVD status is unknown test for BVD antigen to identify any persistently infected (PI) animals

Colostrum Intake

- Newborn calves are born without antibodies to prevent disease
- Colostrum is the sole source of these antibodies

Quantity

- First feed of 3 litres within 2 hours of birth
- Second feed of 3 litres within 6-12 hours of birth
- Colostrum should be fed at 38°C

Colostrum Intake

Quality

- High quality colostrum contains at least 50g/litre of the antibody IgG
- Use a colostrometer or refractrometer to measure IgG

Quickly

- Absorption of colostrum declines rapidly from more than 40% at birth, to less than 5% by 20 hours after birth

Blood testing can indicate if adequate colostrum has been received.

Milk Feeding

- Milk replacers must deliver target growth rates of 0.8kg/day. Aim for at least 80kg weight at weaning
- Feeding rates have been historically too low – feed minimum 750g/day
- Adapt feed concentration depending on environmental conditions
- Offer consistent product at every feed
- Very high level of hygiene required



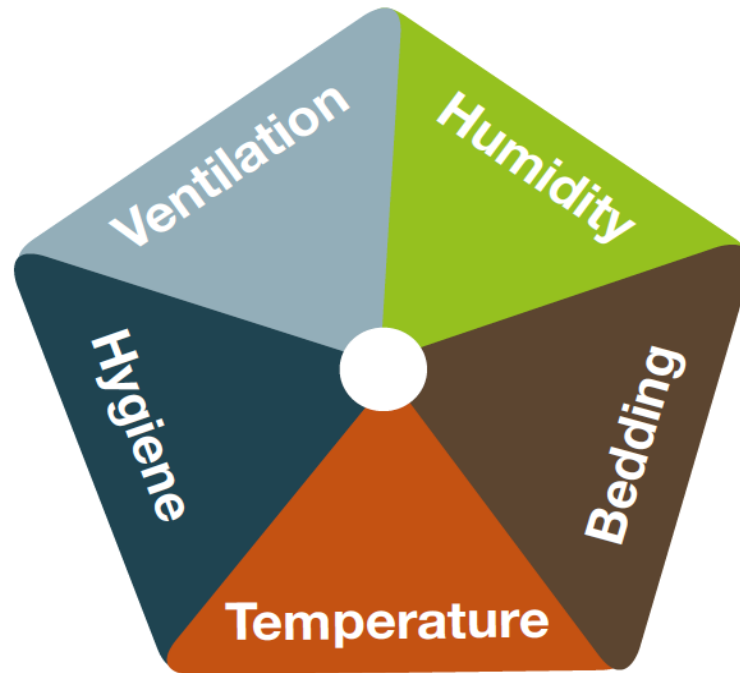
It is a legal requirement to feed calves under 28 days of age at least two liquid feeds a day.

Weaning Management

- Most producers wean at 8 weeks old – but calf must be ready
- Starter feeds should be available from when calf arrives in rearing unit
- Wean when consuming 1.5kg/head/day of starter feed
- Two approaches:
 - Abrupt – milk feeding stops suddenly
 - Gradual – slow reduction of milk over 7 to 14 days
- Research suggests gradual weaning shows better growth/cost effective

Environment and housing

Five crucial factors affect the environment around a calf



Ventilation and temperature

Ventilation

- A constant supply of fresh air is essential
- Good ventilation removes stale, humid air
- Draughts at calf level must be avoided

Temperature

- Monitor temperature in calf housing daily
- Newborn calves should be kept in temperatures no less than 10-15°C
- One month old calves should be kept in temperatures no less than 6-10°C
- Roof lights should be north-facing to avoid overheating

Humidity and bedding

Humidity

- High humidity allows pathogens to persist
- Good ventilation and floor drainage is essential
- Prepare milk feeds and clean equipment away from calf housing

Bedding

- Always provide sufficient clean, dry, straw for bedding
- Important for thermal comfort
- Calves' legs should not be visible when lying down



Promoting calf health

Health has critical impact on successful calf-rearing.

Common diseases include:

- Pneumonia
- Mycoplasma
- Joint-ill and navel-ill
- Calf scour (accounts for 50% of all calf deaths)
- Coccidiosis
- Cryptosporidiosis

Pneumonia

- Pneumonia can cause irreversible lung damage. If the calf does not die, lifetime performance will suffer
- Causes are viral and secondary bacterial infections
- Look out for coughing, nasal discharge, laboured breathing
- Treat immediately and minimise spread to other calves
- Prevention better than cure – devise vaccination programme
- Ensure housing is well ventilated

Identify problems early

	Signs of good health and vigour	Look for early signs of disease	Late signs of disease
	<ul style="list-style-type: none"> Bright Playful Curious Keen to drink milk 	<ul style="list-style-type: none"> Quiet Slow to stand Still drinking milk 	<ul style="list-style-type: none"> Dull Reluctant to stand unaided Off milk
RESPIRATORY			
	<ul style="list-style-type: none"> Clear eyes and nose No Cough <p>Normal temperature (38–39°C or 100–102°F)</p>	<ul style="list-style-type: none"> Discharge from eyes and nose Cough on movement <p>High temperature (>30.5°C or 103°F)</p>	<ul style="list-style-type: none"> Severe discharge with pus Frequent coughing/wheezing <p>High temperature (>39.5°C or 103°F)</p>
SCOURS			
	<ul style="list-style-type: none"> Clean hindquarters Well formed faeces <p>Normal temperature (38–39 °C or 100–102 °F)</p>	<ul style="list-style-type: none"> Dirty hindquarters Loose faeces <p>Variable temperature</p>	<ul style="list-style-type: none"> Wet hindquarters Hair loss Dehydrated Watery faeces <p>Variable temperature</p>

Information supplied
by Volac.

ACT NOW
Implement the treatment plan
agreed with your vet

Minimising stress

Key stress points:

- Disbudding – ideally disbud in first two months of life
- Castration – rubber ring or Burdizzo method. If calf older than two months a vet must castrate
- Weaning
- Change diet gradually over 2 to 3 weeks when moving to growing/finishing unit

Monitoring performance

Daily Liveweight Gain (DLWG) is the most important indicator of performance.

$$\text{DLWG (kg/day)} = \frac{\text{Finish weight} - \text{start weight}}{\text{Age (days)}}$$

Set benchmarks for DLWG and health issues, eg. pneumonia or scour cases, so changes can be made to improve the situation.

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