

General

- Feed milk via a teat and at least twice a day.
- Regular cleaning of feeding equipment.
- Continuous access to clean fresh water from birth.

- No abrupt changes in diet.

Colostrum

- 1-2-3: feed 1st milking from mother within 2 hours, 3 litres.
- Check colostrum quality with Brix refractometer (>22%; 50g IgG/litre).
- Feed transition milk for 2 days.

Milk Feeding

- Whole milk or milk replacer.
- Feed $\geq 15\%$ body weight per day.
- Adhere to manufacturer's instructions with milk replacer.

Weaning

- Start when calf consuming $\geq 1\text{kg}$ concentrate/day for 3 days.
- Gradually reduce milk feed over 7-14 days.
- Avoid other stressful events (e.g. mixing calves).

Concentrates /forage

- Offer forage and concentrates from day 3.
- Small amounts of fresh, palatable concentrates after milk feed.
- 10-20% fibre DM (hay or straw, 3-4cm in length).
- Good quality calf starter ration concentrate to forage ratio 8:1.

General

- Colostrum 1-2-3.
- Minimise stomach tubing and feed via a teat.
- High standards of hygiene (e.g. naval care).
- Separate sick or injured calves, consider supplementary heat and pain relief.
- Adopt leader-follower system at pasture.

Disbudding

- Provide pain relief (local anaesthetic and non-steroidal anti-inflammatory drugs).
- Ask vet about batch disbudding.
- Use a disbudding crate.

Calf Scour

- Rehydrate with electrolytes.
- Continue to feed milk.
- If calf cannot stand- call the vet.

Euthanasia and Fitness for Transport

- Protocol for humane 'cut-off' points and methods of euthanasia.
- Ensure fitness to transport (stand on all four legs, healthy and well-fed).



Physical Comfort

- Space to exercise and rest.
- Deep, clean, dry bedding (e.g. 15cm straw bed).
- Dry, non-slip, sloped solid floors.

Environmental Comfort

- Housing temperatures $\geq 10^\circ\text{C}$
- Draught free, well ventilated.
- Shade and shelter at pasture.

Psychological Comfort

- Good Lighting.
- Low stocking density ($\geq 1.5\text{m}^2$ /calf) to minimise bullying.
- Group (up to 12 calves) or pair housing.

- Understand calf behaviour.
- Recognise when veterinary intervention is needed and when a calf should be euthanised.
- Always provide pain relief when needed.
- Minimise calf stress (e.g. opt for stable groups).
- Use low stress handling - gently, quietly and with compassion.

Consumer Perceptions

A SWAB survey of 972 consumers on the island of Ireland showed that they have a generally positive perception of farm animal welfare on dairy farms but feel they lack knowledge.

