



CALF REARING

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These recommendations are based on research carried out by national research systems and universities in various parts of Africa. The views expressed are not necessarily those of the East Africa Dairy Development project.

Problem	What to do
Calf is not growing properly. It has diarrhoea and its coat is rough, not smooth and shiny.	If you are feeding your calf minerals and vitamins and enough milk and concentrate, it may be infected with parasites. This may be caused by poor hygiene, overcrowding or allowing your calf access to wet places. Deworm and vaccinate your calf. See your extension provider, who can advise you on vaccination and deworming programmes.

Other important things

Keeping records

- Records are the only way you can tell if your calf is growing properly and that it is being fed and managed in a good way.
- If possible, weigh your calf once a month. This can be done on a scale or by using a weigh band.
- The calf should be gaining 0.5 kg per day or 15 kg per month if you are keeping it well.
- At a later stage your records will help you decide when to breed your heifer.

Housing your calf properly

- Some health problems and calf losses are caused by poor housing.
- Construct a calf pen that
 - allows fresh air to circulate
 - keeps out draughts and rain
 - allows urine to drain away
- The pen should have a feeding area and a drinking point.
- Do not mix calves in pens. Each calf should have its own.
- Remove dung from the pen regularly and provide the calf with clean bedding.

What to do about common calf health problems

Problem	What to do
Calf has a rough coat (skin) that has changed colour and calf is losing hair. Leg joints are swollen.	Calf is not getting enough minerals and vitamins in its diet. Or, calf is in the pen too long without exercise. Give it minerals salt and multi-vitamins and let it walk outside in the fresh air and sunshine.
Calf is lying down most of the time. It has diarrhoea and sometimes vomits.	Feed your calf at the same times every day and with milk of the same temperature (it does not have to be warm). Make sure that calf does not drink milk too quickly. Keep the milk bucket clean, especially if more than one calf drinks from it.
Calf has diarrhoea.	Stop feeding milk and concentrate. Mix a solution of 1/2 teaspoon of salt with 6 teaspoons of glucose (or sugar) in 3/4 litre of water (large Coke bottle; a teaspoon holds 5 g). Give the solution to the calf 3 times on the first day. Next day, mix 0.5 litres of milk and 0.5 litres of water and give three times a day. The diarrhoea should stop; then continue feeding the calf as usual. If the diarrhoea does not stop, give the calf antibiotics or consult your veterinary or extension provider.
Calf's navel is infected. Calf is feverish and has diarrhoea, with mucus or blood. It is coughing and breathing heavily.	You may be keeping your calf in a pen that is dirty and has poor ventilation. Isolate your calf from other calves immediately and call your extension provider for advice.

To rear calves, you need to know ...

- how to feed your calf
- how to keep records of the calf's growth
- how to deal with the health problems your calf may face
- how to provide proper housing for your calf

Feeding your calf in a zero-grazing system

- Allow the calf to stay with its mother for 3 days after birth so that it suckles enough colostrum (the rich milk that helps protect your calf against disease).
- Separate the calf from its mother after 3 days and confine it in a clean calf pen.
- Train the calf to drink milk from a bucket. Ensure that the bucket is properly cleaned after each feed (if possible have a bucket for each calf) throughout the period that the calf is given milk. Train the calf as follows:
 - Hold the calf's head near the colostrum or milk in a bucket.
 - Put your two middle fingers in the calf's mouth.
 - Lower the calf's head into the milk or colostrum with your fingers still in its mouth.
 - When the calf tastes the milk or colostrum, remove your fingers and let it drink alone.
 - Repeat this process until the calf voluntarily drinks on its own.
 - Ensure that the calf does not drink too much or too quickly.

Period	Feeding schedule
Day 4 of week 1	Give 2 litres of milk twice a day (morning and evening) and introduce a handful of calf pellets.
2–3 weeks	Give 2.5 litres of milk twice a day plus 0.5 kg of calf pellets. Introduce good-quality hay or forage.
4–8 weeks	Give 2.5 litres of milk twice a day plus 0.75 kg of calf pellets plus free choice of good-quality hay or forage.
9 weeks	Give 2.5 litres of milk twice a day plus 1 kg of calf pellets plus free choice of good-quality hay or forage.
10–11 weeks	Reduce milk to 2 litres twice a day (morning and evening) plus 1 kg of calf pellets plus free choice of good-quality hay or forage and plenty of water.
12–13 weeks	Keep reducing the amount of milk given to 1.5 litres twice a day. Always offer enough hay to ensure free choice. Restrict calf pellet intake to 1.0 kg per day.
After 13–14 weeks	Keep reducing the amount of milk given to 1.0 litre twice a day. Offer plenty of hay. Restrict calf pellet intake to 1.0 kg per day.
Thereafter	Stop giving milk and give the calf good-quality hay or forage.

What if a mother dies in calving or is not producing enough milk?

- Try to ensure that at birth the calf is fed colostrum obtained from another cow that has calved.
- Feed warm colostrum using a baby's feeding bottle.
 - After your orphaned or abandoned calf has taken colostrum, feed it milk from a bucket (as directed at left) until it is about 16 weeks old.

Feeding your calf in a grazing system

- Allow the calf to stay with its mother for 3–4 days after birth so that it suckles enough colostrum.
- Between weeks 1 and 3, allow your calf to suckle for about 5 minutes twice a day (morning and evening).
- Allow your calf to suckle the cow either before you start milking or when you finish milking (leave enough milk in the udder for the calf to suckle).
- Never let the calf suckle too much milk as doing so will cause digestive problems; on the other hand, do not let the calf suckle too little because that will affect its growth and health.
- From 3 weeks of age until weaning, let your calf suckle in the morning and in the evening only.
- Introduce your calf to solid feeds in addition to the milk as soon as possible. Introduce feed concentrate at the rate of 0.5 kg per day. From 2 weeks after birth, give your calf a little good-quality hay or freshly cut green forage. Take all uneaten feed away daily and replace with fresh feed. Uneaten feed can be used as manure for growing crops.
- Gradually increase the amount of concentrate up to a maximum of 1.5 kg per day by week 14. Increase amount of hay or fresh grass as intake increases.
- Reduce the amount of milk you give the calf as you increase the amount of dry feed you give.
- Wean your calf by week 16. Wean earlier if you prefer to bucket-feed milk.
- If your cow lets down milk only in the presence of its calf, let the calf suckle briefly before you start milking.
- Remember—always have plenty of clean fresh water available for your calf and cow and also for your other livestock.



A good calf pen can be constructed of either metal or timber