



Agricultural Innovation Program (AIP) for Pakistan

AIP-Livestock Fact Sheet no: 05

THE IN-CALF COW

Introduction

The rearing of the calf starts right after the most suitable sire has been selected and the cow has been fertilized. **The correct feeding of the in-calf cow is the right start in rearing the calf.**

The gestation period of a cow is about 280 days, depending on the breed.

Two months before the expected calving date, the cow should be dried off. During the “dry” period, the foetus increases its weight considerably (Friesian breed):

- foetus of 7 months = 10 kg
- foetus of 8 months = 20 kg
- foetus of 9 months = 35 - 40 kg

The last 2 to 4 weeks before the expected calving date, the cow should be given a “steaming” treatment (the practice of commencing to feed extra rations, especially of grain and concentrates, to late pregnant cows in an attempt to promote maximum milk production from the very beginning of the lactation. Feeding usually commences about 4 weeks before the due date).

Birth

As calving time comes near, the ligaments around the tail head and pelvis relax and sink. The **vulva swells** and **mucus discharge** is common. The **udder** becomes rapidly **bigger** (fuller) and udder oedema (swelling) may develop. **Shortly before birth the uterus begins contracting**, mildly at first. This may go on for as long as 24 hrs (average about 4 hrs), during which time the **cow becomes increasingly restless**.

The foetus is pushed against the cervix causing it to open. Also during this time the foetus assumes its birth position, lying on its stomach with the forelegs extended

and the head resting on them. Powerful contractions of the uterus begin and these are supported by voluntary contractions of the stomach muscles. The result is that the foetus is pushed through the birth channel within a few hours, under normal conditions. **As the calf’s head passes down the vulva, it curves downwards.** This helps the rest of the calf pass through the pelvis more easily. In its normal birth position the calf assumes its smallest diameter. This is necessary to make the birth possible without too many difficulties. **As a rule the calf will be born within an hour after the front begins to show** in the vulva.

If the calf has **not been born after an hour** or two, an examination should be made. If the calf is in its normal birth position some assistance may be given by pulling a rope that has been attached carefully to the forelegs.

Always pull downwards in the direction of the udder rather than straight out of the cow. Pull only when the cow strains and do it in a careful way. Before giving assistance, clean water with a disinfectant (e.g. detol) should be used to wash the vulva and surroundings area. The person given assistance should clean his hands and arms thoroughly. Also the pulling rope should be disinfected.

Abnormal positions of the calf occur sometimes. Veterinary assistance may be needed then. Some abnormal positions include:

- only one front feet protrudes
- the forelegs appear but without the head
- the hind legs appear first
- the tail appears first.

In these cases the calf must be repositioned most of the times before it can be delivered.

DAIRY EXTENSION MATERIAL

Other abnormalities that can occur during parturition include:

- **uterus contractions are not strong enough**
- **foetus is too big; in this case surgery (caesarean) may be necessary to deliver the calf.**

In normal delivery the foetal membranes usually rupture about the time the forelegs pass through the vulva. Normally the calf is delivered free of the foetal membranes, which are still tightly attached to the placenta to assure a good oxygen supply to the calf during birth. **The umbilical cord (navel cord) usually breaks when the calf passes through** the vulva. At this time the calf must start breathing since it can no longer obtain oxygen from the mother.

After birth, oxygen is the first requirement for survival. Make certain that the nostrils are free of membranes and fluids. Breathing can be stimulated by blowing air into the nose or by tickling the nasal cavity with a straw. This can make the animal sneeze thus cleaning the nostrils. **After birth the calf must receive colostrum as soon as possible** (at least within two hours after birth)

After the calf is born, uterine contractions continue which free the foetal membranes from the uterus and expel them. This is the **afterbirth**. It should be **disposed** of as **soon as it is expelled**. If the afterbirth is **not expelled within 12 hours** after parturition, it is **considered retained**.

When the **placenta is retained** and the cow is sluggish, has a poor appetite and appears to be sick, **veterinary attention is needed**. When the cow is eating and behaving normally, most of the times a bolus (antibiotics) is placed in the cervix. Normally the afterbirth will come off a few days later. **It is bad practice to remove the afterbirth with force**. The afterbirth is never removed completely in this case and **serious damage** to the uterus may be done resulting in **sterility of the cow**.

Some fluid, containing blood and bits of tissue are usually found in the uterus after calving. This fluid is normally expelled during the first days after calving.

This does not necessarily mean there is an infection. However uterine infections do occur

regularly after calving. **A good indication of the beginning of an infection is the odour of the discharge**. The bloody discharge that occurs the first days after calving should not have a strong, foul smell. If there is a foul smell and pus, **prompt attention is needed**. Treatment is possible by placing an antibiotic (bolus) in the cervix.

The calving sequence

One day before calving, the cow should be brought into a disinfected, **hygienic** calving box (remember that a large paddock is much better than an infected, dirty calving box!)

- sometime before birth the udder starts swelling (1-2 weeks)
- about 12 hours before birth, the body temperature of the cow will go down a little
- slime is secreted from the vagina
- finally the animal becomes restless
- then it starts pressing
- **first the foetal membrane appears, widening the birth route; it will soon burst**
- then the feet membrane shows up and the front and the nose of the calf appear
- help the cow, by pulling on the calf only when the cow is pressing; pull with care and do not force anything
- if in doubt, ask for veterinary assistance

Care of the newly born calf

- immediately after birth, the navel string should be disinfected with iodine solution; this should be repeated 24 hours later
- calves can be kept with their dams for 12-24 hours to allow suckling; a generous amount of colostrum taken during the first hours gives the calf some measure of protection against various infections
- **only healthy calves should be kept for rearing, at least 90% of the female calves born twin to a male, are sterile.**