

Calving and Care of the Newborn Calf

For Irish Farmers, Advisors, Vets



CALF HEALTH PROGRAMME

AHI gratefully acknowledges the financial and other contributions of our stakeholders.



CALF HEALTH PROGRAMME



Animal Health Ireland, 4-5 The Archways, Carrick-on-Shannon, Co. Leitrim, N41 WN27

If any of your full-term calves are stillborn or die within 24 hours, or if calves are too weak to drink after birth you should investigate the points laid out in this leaflet and discuss what might be the underlying problems with your local vet. In carrying out any investigation, it may be necessary for your vet to submit relevant samples (e.g. calf carcasses, placentas, blood samples) to your local veterinary laboratory.

What can you do in advance to PREVENT calving problems?

Well
grown first
calvers are
essential

- **Ensure your heifers are big enough at calving**

Heifers should have reached at least 60 – 65% of their mature body weight at breeding, should be calving at 24 months of age, and should have attained 90% of the mature body weight of your mid-lactation 4 year old cows.

Tip: weigh some of your mid-lactation four year old cows as a guide to mature body weight.

- **Choose an easy calving sire**

On average, some breeds will have more difficult calvings than other breeds; this is particularly true for beef breeds.

There is as much variation between individual sires within a breed, as there is between breeds for calving difficulty, gestation length and stillbirth rate.

When choosing an AI sire, comparing the economic breeding index (EBI) is as important as the breed you choose. With stock bulls, without such genetic information, there can be a greater risk of unknown calving dates, calving problems, big calves and calf losses.



Regular weighing will ensure you know your heifers are on target

- **Make sure your cows and heifers are neither too fat nor too thin at calving**

Aim to manage the body condition at calving to reach values between 3.0 and 3.5 for dairy and 2.75 to 3.25 for suckler cows (5-point scale).

- **Feed a balanced diet during pregnancy**

Imbalances in minerals, particularly calcium, magnesium, potassium, iodine and selenium, can occur with home-grown forage-only diets. Provide supplementary minerals and vitamins during the last two months of pregnancy.

Be aware that a straw-only diet can reduce colostrum quality in your cows.

Plan
your calvings
to minimise
problems

- **Control calving date**

Calves grow very fast in the last period of pregnancy. If you have cows going over the due date and you fear difficult calvings due to oversized calves, discuss controlling the calving date with your local vet.

- **Control infectious diseases**

Be aware that stillborn, weak or sick calves can also be caused by infections of the cow. Discuss the appropriate strategies (vaccination/eradication) for your herd with your local vet.

How can you **MANAGE CALVINGS** to reduce calving problems and calf losses?

1 Calve all heifers and cows in a calving unit

Clean calving pens and housing to minimise disease

Calving facilities should be clean, well-bedded and well-illuminated and have an adequate supply of clean water. They should be equipped with a self-locking restraining gate (preferably suitable for Caesarean Section) and should not be used to accommodate sick cattle.

Individual calving boxes are preferable. Depending on the precalving movement policy, the calving pattern and the residency time in the pen, at least one individual calving pen (4m by 4m) may be required per 25 cows.

Well-managed, group-calving units (loose pens, pads, paddocks) can also provide suitable calving accommodation. (See *AHI website www.animalhealthireland.ie regarding issues on Johne's Disease and group calving facilities.*)

2 Move pregnant animals to the calving unit before calving begins

- Moving pregnant animals to the calving unit before calving begins reduces stress at calving, which can be a particular problem in heifers.
- Inspect the animals near to calving (based on breeding/pregnancy detection records) at least twice daily, and move them into the calving unit when you detect signs of impending calving (see below).
- If a cow is already 'sick to calve', when first observed, it may be better to wait until she has started to calve (waterbag or foetal hooves are visible) before moving her into the calving unit. This advice applies particularly in the case of heifers.

Signs that calving is close:

- o softening of the pin bone ligaments
- o swollen udder
- o dripping colostrum.

'Sick to calve' signs to look for:

- o tail raised
- o mucus at vulva
- o restless - standing and lying frequently.

3 Observe all calvings if possible

Observe all calvings if possible

- If cows are 'sick to calve', keep a discreet eye on them every two hours. Do not move, disturb or unnecessarily handle cows during this period. Supervision does not imply intervention, as most calvings do not require assistance.
- Keep a particularly close eye on high-risk calvings or calvings which are likely to be prolonged, e.g. overfat heifers, heifers in calf to a sire known to produce big calves, cows carrying twins and cows with a history of milk fever.
- Calving cameras can be a useful aid to reduce the workload involved in 24h calving supervision and to avoid disturbing the calving, particularly for heifers which are more sensitive to stress.
- Evening or nighttime feeding can reduce, although not eliminate, the number of night calvings.

4 Intervene if calving is not progressing normally

Intervene
only when
necessary

After six hours (unless there is an obvious reason for earlier intervention) of being 'sick to calve' without the waterbag or feet appearing, examine the birth passage with a lubricated, gloved hand. (Dispose carefully of the gloves after calving).

Depending on what you find:

1. give more time to calve (calf normally presented and cow straining intermittently)
2. intervene if possible (e.g. calf with head or legs down)
3. ring your vet now (e.g. oversized calf, calf coming backwards, dead or deformed calf, intertwined twins, twisted womb, smelly or bloody discharge).

If in doubt, give the vet a call for advice, as rushing in to assist when the cervix and vulva are not fully open can be as detrimental as waiting too long to intervene.

If the calf hasn't been born two hours (three hours for heifers) after the waterbag or foetal hooves have appeared, examine the birth passage and the calf with a lubricated gloved hand. (Dispose carefully of the gloves after calving).

If the emergence of the waterbag or fetal hooves was not observed, as long as the cow is straining and making progress over half an hour, intervention is not required.

Intervention is required where the calving is not likely to progress further at a normal rate without assistance or where the calf appears distressed (swollen tongue or head, bluish gums, poor reflexes). Assistance may be in the form of:

- o lubrication
- o manual pulling of the calf
- o pulling of the calf with the help of the calving jack.

A decision must be made as to when the degree of calving difficulty exceeds the skill of the operator and when to seek veterinary assistance.



Attach ropes above the fetlocks



Set up calving jack



Only pull when the cow is forcing

5 Improve your calving skills

- The ability to deliver a live calf and healthy cow, at an assisted calving, can vary due to inadequate skills and lack of practice, as only a minority of cows require assistance and few of these are difficult calvings.
- You can improve your calving skills by observing how your local vet deals with a problem calving and discussing with him or her how to improve your techniques.
- Having good calving equipment (e.g. non-slip calving jack, disinfected coloured calving ropes, lubricant, arm-length gloves) in the calving unit will facilitate good calving technique. Coloured ropes will ensure you don't lose the ropes in the straw bedding.

TIPS:

- ensure the cow is standing before attempting to correct a wrongly presented calf
- put ropes on above the fetlock, ensuring that the knots are not on the sides of the legs
- only pull when the cow forces and relax the ropes when she relaxes
- pull on alternate legs until the head emerges and rotate the calf after the chest emerges to prevent a hiplock.

Good technique is particularly important where a calving jack is used as it can cause severe injuries to both the cow and the calf if used incorrectly.



Rotate the calf after the chest emerges



Check the calf for breathing and alertness



Clean jack and ropes directly after each calving to minimise disease spread

HOW CAN YOU BEST MANAGE YOUR NEWBORN CALVES?

The 'GOLDEN HOUR' after calving.

The first hour after calving is the most critical period in the entire life of the calf.

This is when:

1. resuscitation may be needed
2. the dairy calf needs to be removed from the cow
3. you can prevent navel ill.



Colostrum needs to be fed within **TWO HOURS** after calving. (See *AHI leaflet - 'Colostrum Management' for further details*).

Delaying any of these jobs will result in increased risk of calf disease and death.

Calf resuscitation

Most calves don't need resuscitation. However, high-risk calves from problem calvings will benefit from resuscitative care during and immediately after calving. To identify calves requiring resuscitation you need to be present at the calving and looking out for the predictive signs of calf distress.

High risk calves requiring resuscitation can be identified:		
Before birth	During birth	After birth
by the predicted likelihood of a problem calving (premature, wrongly presented calf, twins, slow calving, tight calving, hard calving)	by large limbs, swollen tongue or head, bluish gums and muzzle, yellow/brown/red stained birth fluids and poor reflex response to pinching between the hooves	by no breathing or gasping/bellowing, lying flat out unable to lift the head and slow to sit up, stand and to suck

Where you identify a high-risk calf before calving, you can begin resuscitation during calving once the calf's chest has emerged, for example, during a hiplock calving.

First aid can be given to a high-risk calf without any equipment:

- once the high-risk calf is born, suspend it upside-down for a short period of time (never longer than one minute)
- then pour cold water over its head and/or stick a straw or finger into its nostrils
- then place it sitting upright on its chest
- very weak, cold, wet, shivering calves should be dried off and placed under an infra red lamp
- ask your local vet regarding other options such as stimulant products or other aids.

Remove the dairy calf from the cow

Once the calf is born, it is at immediate risk of picking up infections via the navel, mouth and nostrils from the calving environment, the cow and any other animals in the same airspace.

Hence, the dairy calf should be removed from the cow immediately after birth (the cow can be allowed to lick the calf) and placed in a clean, freshly-bedded area where it is fed colostrum. (See **AHI leaflet - 'Colostrum Management'** for further details).

Safety at calving

A quarter of Irish farm accidents and one fifth of farm deaths in older farmers are livestock-related. Attacks by recently calved cows are a common cause of such accidents. In addition, zoonotic infections can be contracted by farmers and their vets around calving.

- When handling cows at calving (particularly if they are calving prematurely or if the calf is dead a while) always wear arm length gloves and washable protective clothing and boots.
- When handling the newborn calf never turn your back on the cow and always keep a locked gate between you and the cow when removing the calf.

Preventing NAVEL ILL

Use
correct navel
care routine

Check regularly for navel ill – handle the navel of all calves with clean or gloved hands at birth and in the first week of life to check for excessive bleeding, pain, abnormal swelling, odour or pus and treat as recommended by your local vet.

If you have problems with navel ill in your calves it is important to see the 'big picture' and not to focus only on cord care as the answer to the problem. The cause of navel ill is infection spreading from the environment into the calf via the navel cord.

To prevent navel ill you need to address all risk factors that lead to high contamination of the environment and low immunity of the calf:

- improve calf immunity: ensure the newborn calf gets an adequate volume of good quality colostrum as soon as possible after calving (see **AHI leaflet- 'Colostrum Management'**)
- ensure calves are born in a clean, freshly bedded calving unit



Treat navel immediately after calf is born



Check to ensure total coverage of the navel cord

- remove the calf from the calving area immediately and move to a clean calf pen
- dress the navel cord as appropriate:
 - o if you have no navel ill problems, do not alter your navel cord care
 - o if you have navel ill problems in your calves and you don't currently dress the cord start doing so by dipping the cord in an antiseptic solution, for example, chlorhexidine or iodine, and/or focus on the other remedial measures listed here
 - o if you have navel ill problems and you do currently dress the cord, alter your procedure (e.g. change from iodine to chlorhexidine, change from a teat dip to a navel dip solution, dip instead of spray) or stop doing it and focus on the other remedial measures listed here.

Incorrect cord care can do more harm than good. Discuss your procedures with your local vet.

Points to Remember



TECHNICAL WORKING GROUP: Ingrid Lorenz – (Chair) University College Dublin, Charles Chavasse – Pfizer, Bernadette Earley – Teagasc, John Fagan – DAFM, Richard Fallon, Liam Gannon – Volac, John Gilmore – Vet Practitioner, Ian Hogan – DAFM, Emer Kennedy – Teagasc, John Mee – Teagasc, Simon More – University College Dublin.
Technical Working Group Rapporteur: Fionnuala Malone, Animal Health Ireland

The contents of this leaflet are based on the following peer-reviewed review article compiled by the AHI TWG on Calf Health:

Ingrid Lorenz, John F. Mee, Bernadette Earley, Simon J. More (2011): Calf health from birth to weaning. I. General aspects of disease prevention. Irish Veterinary Journal. 64:10.
<http://www.irishvetjournal.org/content/64/1/10>

Animal Health Ireland, Main Street, Carrick-on-Shannon, Co. Leitrim 071 9671928 www.animalhealthireland.ie email: admin@animalhealthireland.ie

IMPORTANT NOTICE — DISCLAIMER

While every reasonable effort has been made to ensure the accuracy of the contents of this leaflet at the time of printing, no representation or guarantee is given, whether by AHI, its employees, subcontractors, agents, distributors or any other person, that the contents of this information leaflet are comprehensive, up to date, or free from error or omissions, nor that the advice provided is appropriate in every particular circumstance.

The contents of this information leaflet are not intended to be a substitute for appropriate direct advice from a veterinarian. Appropriate veterinary advice should be taken before taking or refraining from taking action in relation to the animal disease dealt within this information leaflet. If reusing material in this leaflet, please attribute AHI as the source of the information.