

# DISEASE AND HEALTH MANAGEMENT

## (Level 1)

Topic	Training & information Content
6.1	Selection of bulls, use of sexed semen, feeding management of dry cows
6.1.1	The calving process
6.1.2	Use of equipment around calving
6.1.3	Care of cow and calf after calving
6.1.4	Colostrum management
6.2	Milk (replacer) feeding schedule
6.3	From birth to weaning
6.4	Disease and health management
6.5	Handling of calves after difficult birth
6.6	Young stock rearing info and Key Performance Indicators



## 1. You will learn about (learning objectives):

- ❑ All the health characteristics in calves:
  - How to recognize, check, measure, interpretate and act in case of disease
  - How to prevent your calves against management related diseases



## 2. Background

- The youngest animals in the farm are the most sensitive animals
- Therefore knowing all the signs in advance to help prevent calves against further/future problems. You might lose your calves if you think this is the task of a veterinarian.



### 3. Getting the calf ready for life

- Once the calf is delivered it should:
  - i. Take its first breath within 30 seconds
  - ii. Lift its head in 1-2 minutes
  - iii. Roll onto its chest in 2 minutes
  - iv. Attempt to stand within 15 minutes
  - v. Begin shivering in 30 minutes
  - vi. Be standing in 1 hour
  - vii. Be suckling in 2 hours





### 3.1 Getting the calf ready for life Cont'd...

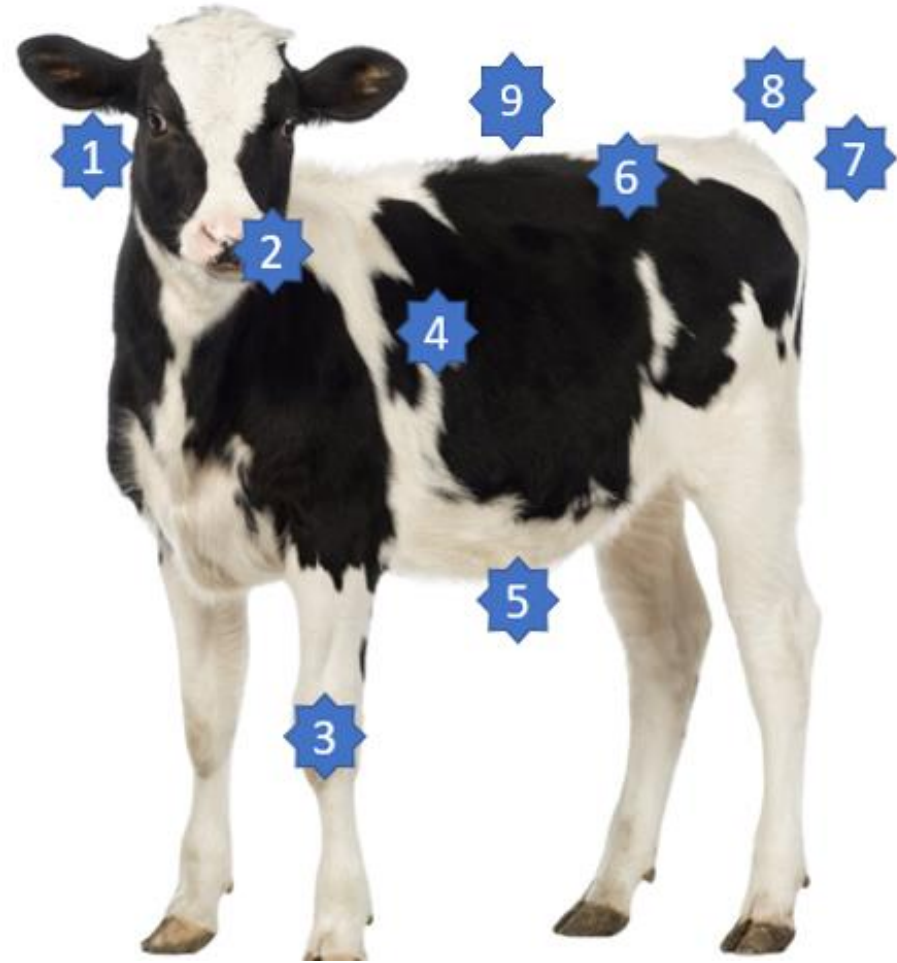
The calf should also have:

- a) A rectal temperature of 38.8-39.4°C after birth and stabilizing to 38.3-38.8°C within one hour
- b) A Pulse rate of 100-150 beats per minute, regular rhythm, strong pulse
- c) 50-75 breaths per minute
- d) No swelling or discoloration of the head, limbs or tongue
- e) Pink and moist mucous membranes

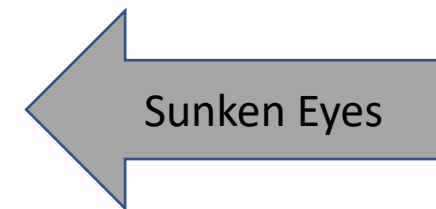
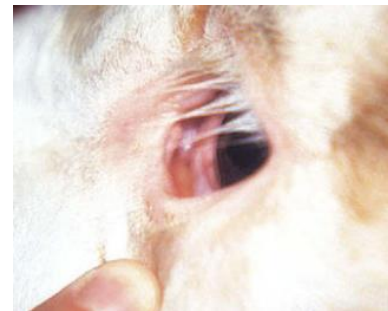
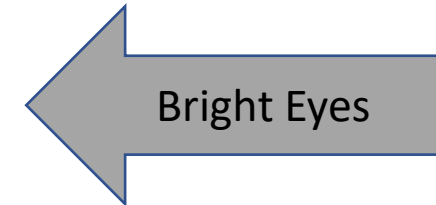
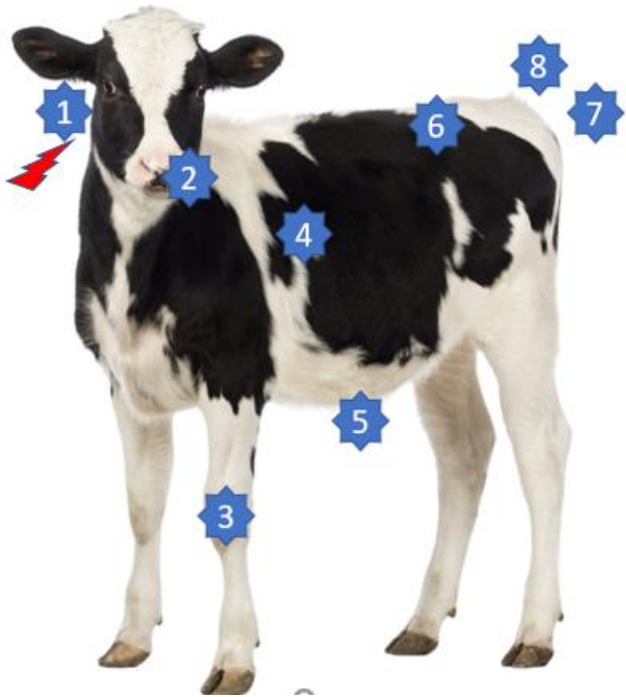


## 4. Health Check Points in a calf

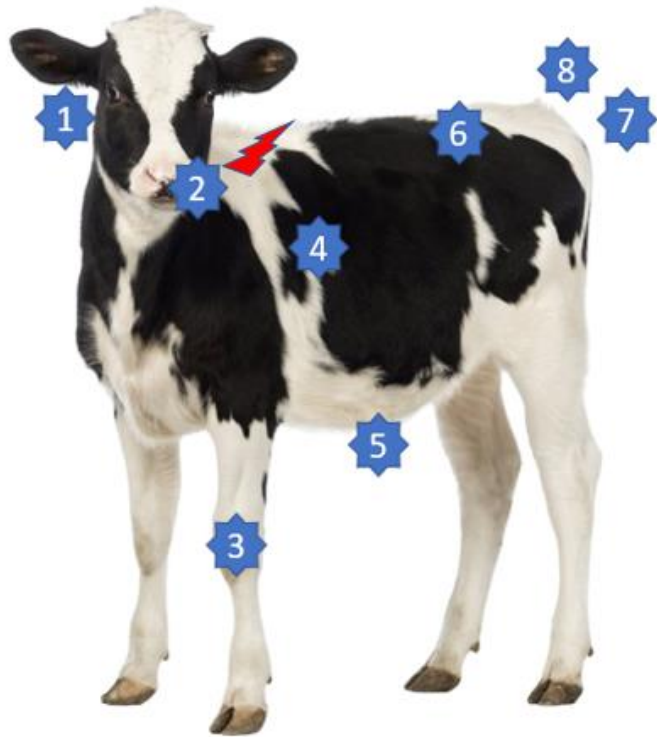
1. Eyes
2. Nose
3. Skin & joints
4. Respiration
5. Navel
6. Body Condition
7. Temperature
8. Manure
9. Stretching



## 4.1 Health Check Points in a calf: 1 - Eyes

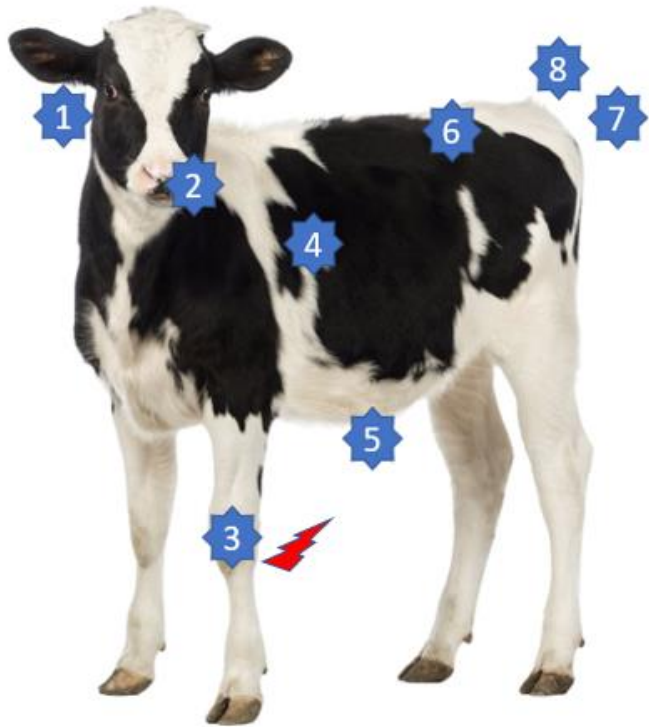


## 4.2 Health Check Points in a calf: 2 - Nose(rhinarium)





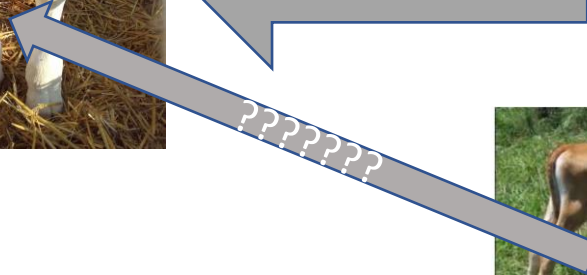
### 4.3 Health Check Points in a calf: 3 - Skin and joints



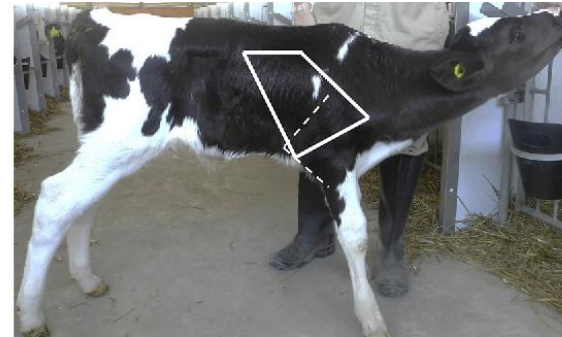
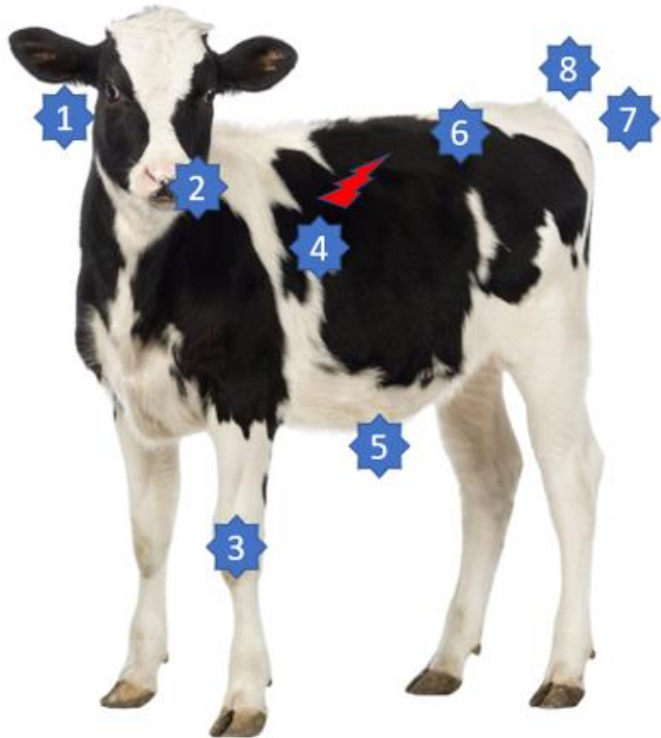
← Shiny haircoat



← Swollen knee



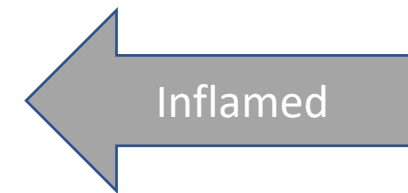
#### 4.4 Health Check Points in a calf: 4 - Respiration



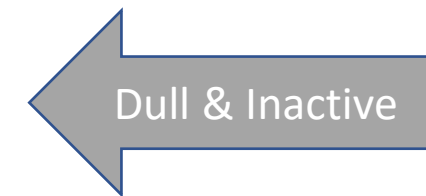
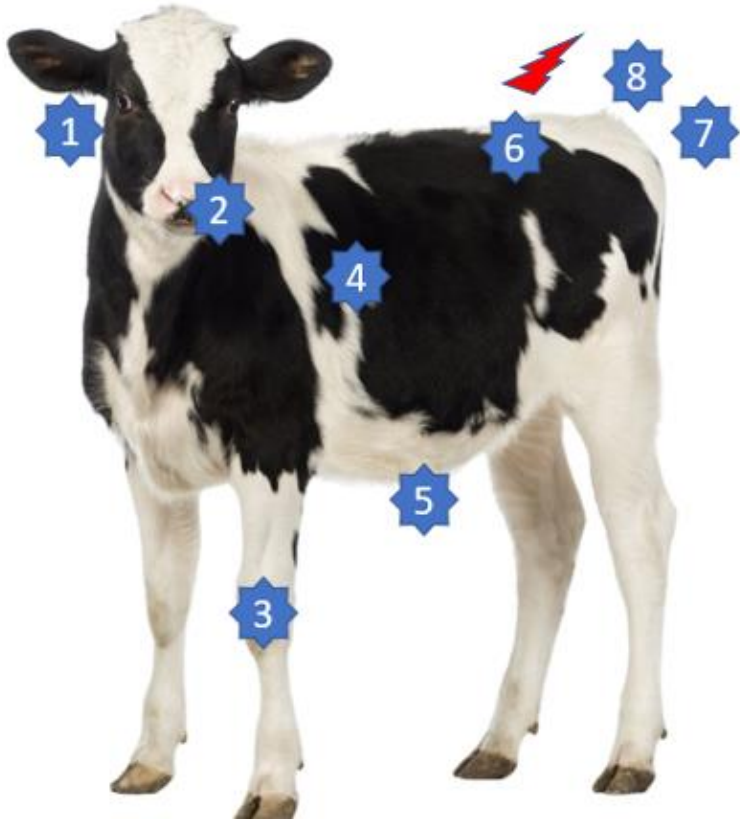
#### Normal values;

- 4 days 56/minute
- 14 days 50/minute
- 5 weeks 37/minute
- 6 months 30/minute
- 1 year 27/minute
- Adults 12-16 /minute

## 4.5 Health Check Points in a calf: 5 - Navel

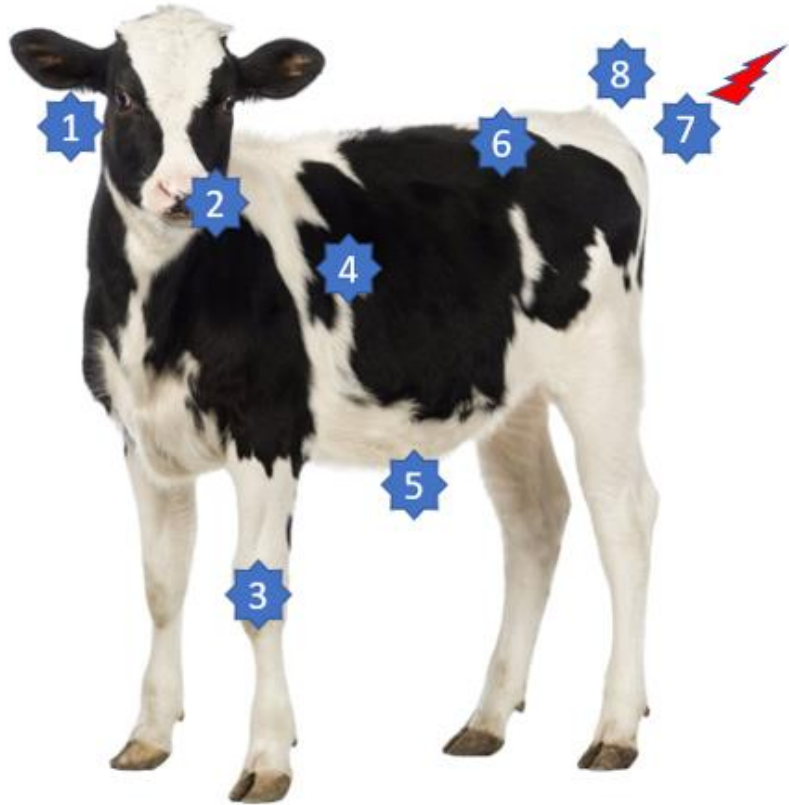


## 4.6 Health Check Points in a calf: 6 - Body condition





## 4.7 Health Check Points in a calf: 7 - Temperature



← 38.6° -39.4°C



← 38° -39.3°C

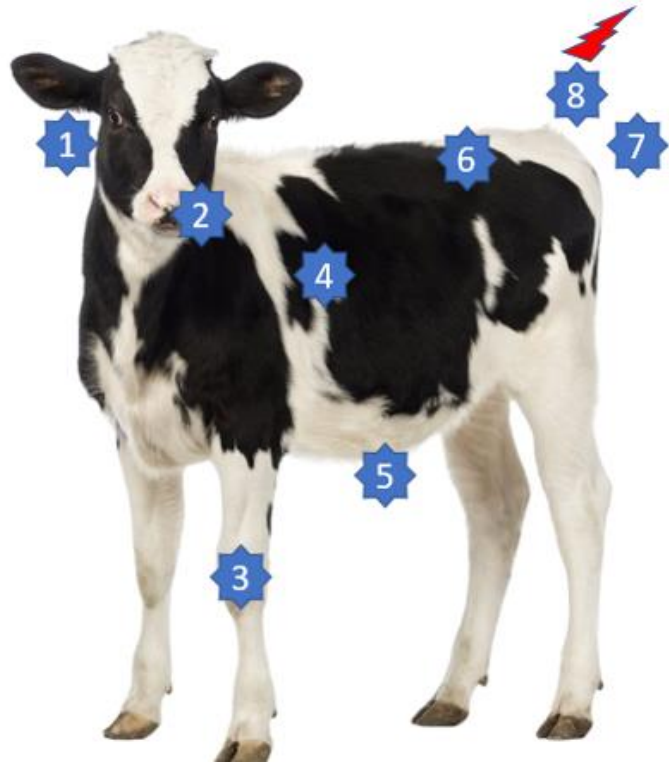


← > 39.3°C

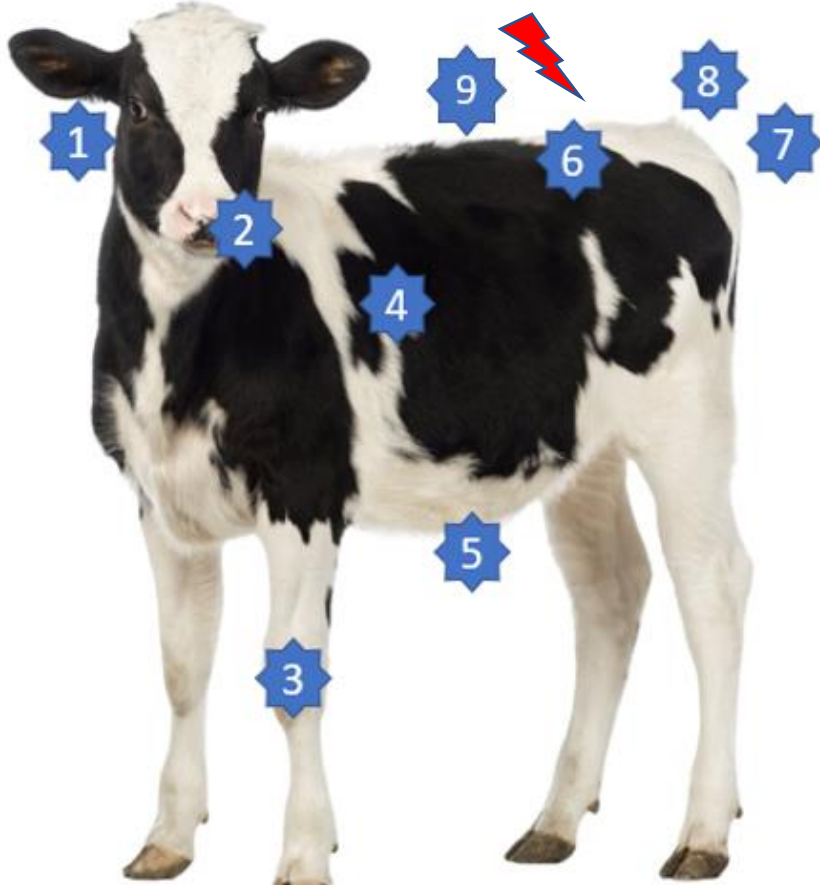




## 4.8 Health Check Points in a calf: 8 - Manure







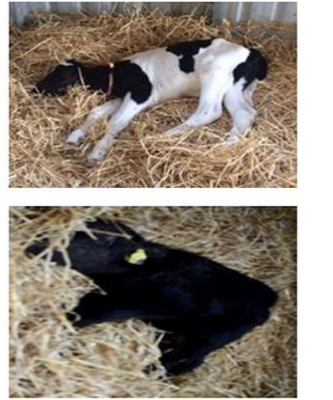
## 4.9 Health Check Points in a calf: 9 - Stretching



- Stretching after a period of rest is a sign of good health

**BE ALERT!**






## 5. How to score Calf's health status

Score	0 Clinically Normal	1 Mild	2 Moderate	3 Severe	4 Grave
					
<b>Demeanour</b>	Bright, alert, responsive	Dull, fairly responsive	Dull, depressed, less responsive	Dull, markedly depressed, unresponsive	Unresponsive to any stimulation
<b>Ears</b>	Alert and mobile	Slightly drooped	Drooped	Drooped and limp	Markedly drooped and limp
<b>Mobility</b>	Actively mobile and able to stand by itself	Standing up and walking independently after encouragement	Capable of standing and walking after lifting	Sternal recumbency (Lying down but unable to stand)	Lateral recumbency (Lying down on side and not able to stand)
<b>Interest in surroundings</b>	Interactive when approached	Interactive when approached	Slow to respond when approached	Uninterested when approached	Unresponsive when approached
<b>Suckle Reflex</b>	Strong suckle reflex	Diminished suckle reflex	Weak suckle reflex	Chewing movements	Absent
<b>Feed intake</b>	Feeding well	Slow to drink and may not finish what is offered	Reduction in feed intake (not finishing what is offered)	No feed intake (not taking any of what is offered)	Absent
<b>Enophthalmos/ Dehydration</b>	Clear bright eyes	Eyes slightly sunken	Eyes moderately sunken	Eyes sunken	Eyes markedly sunken



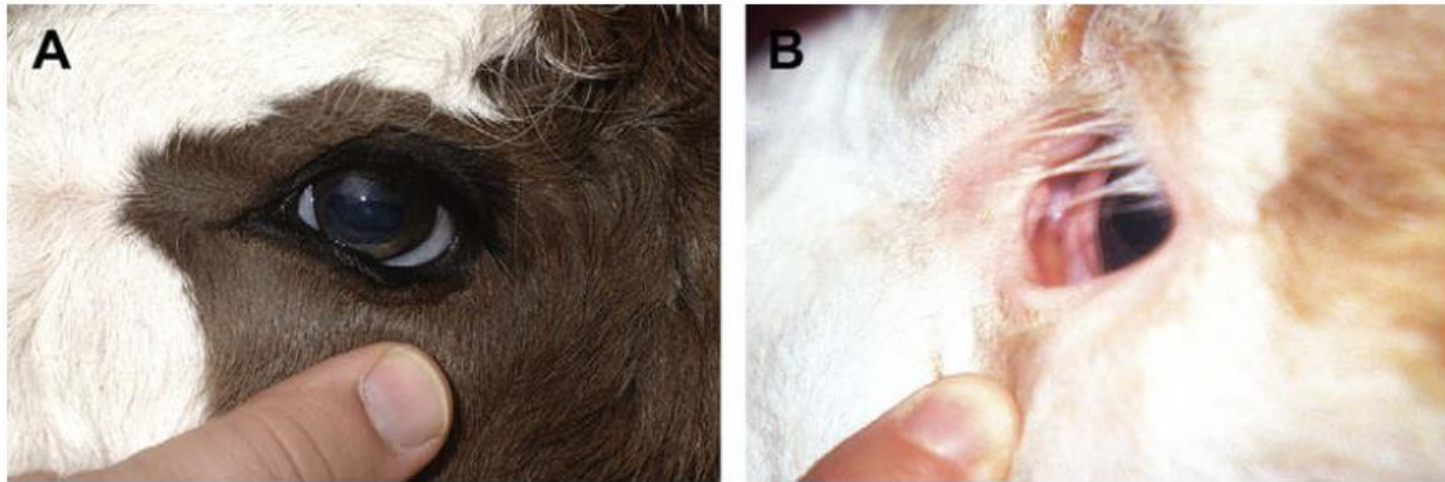
## 6. Scoring your calf's health status

- Based on the scores in the past illustration, try to score the health status of your calf

Score	0 Clinically normal	1 Mild	2 Moderate	3 Severe	4 Grave
Your Calf's score.					
Demeanour					
Ears					
Mobility					
Interested in surrounding					
Suckle reflex					
Feed Intake					
Dehydration					

## 7. Loss of body water: Dehydration

- Dehydration is an underestimated cause of calf mortality. Continuous checks of dehydration level is important and saves calf's life



Calf on the left (A) has a normal hydration status. There is no space between the eyelid and the eyeball. The calf on the right (B) is severely dehydrated. The eye is sunken at least 7 to 8 mm into the orbit. (Courtesy of Peter Constable, BVSc, MS, PhD, MRCVS, West Lafayette, IN.)

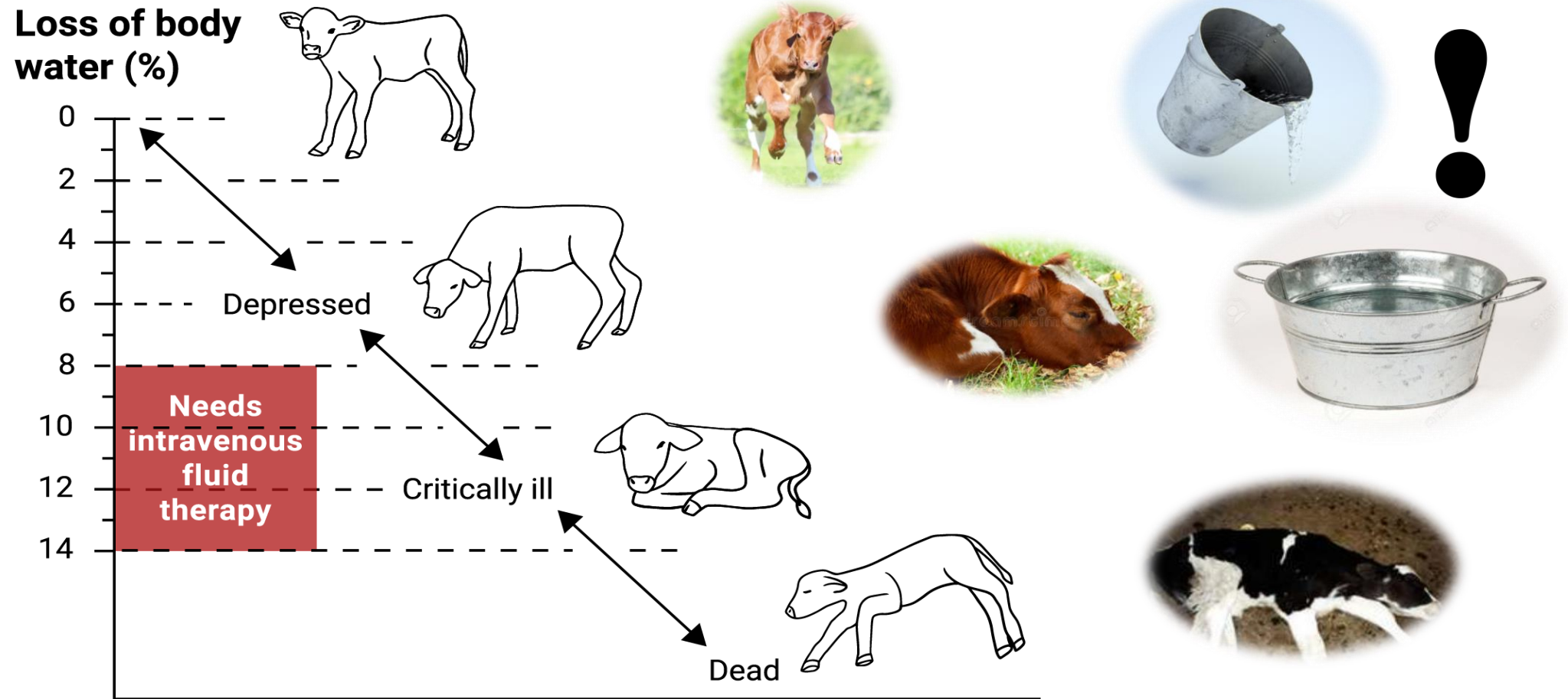


*This cow has painful expression as well as sunken eyes caused by dehydration*



## 7.1 Loss of body water: Dehydration Cont'd...

- Loss of body water can cause depression, critical illness or even death



### 7.3 Checking Skin elasticity for dehydration

- Skin elasticity is a practical tool to estimate level of dehydration and easy to carry out



Dehydration %	Demeanor	Sunken Eyes (in millimetres)	Skin Elasticity (in seconds)	Treatment
< 5%	Normal	None	< 1 sec	None
6-8%	Slight depression	2-4 mm	1-2 sec	Oral
8-10%	Depressed	4-6 mm	4-6 sec	IV Fluids
10-12%	Unable to stand	6-8 mm	5-10 sec	IV Fluids
> 12 %	Unresponsive or comatose	8-12 mm	> 10 sec	IV Fluids

## 7.4 Preventing dehydration

- In case of slight dehydration (6-8%) the oesophageal tube is an excellent tool to give the calf some extra fluids to prevent further dehydration



Save the calves' life

## 8. Pneumonia

- Caused by bacteria, viruses or combination of both
- In calves it is mostly caused by decreased disease resistance resulting to diarrhea

### Treatment:

- Use anti-inflammatory drugs on the first day and antibiotics for at least one week
- Also check level of dehydration, if yes, follow protocol (in 7.4)

### Watch:

<https://www.youtube.com/watch?v=wf4T7N8S2iM>





## 8.1 Examples calves suffering from Pneumonia



*Typical  
examples of  
Pneumonia*



Watch: <https://www.youtube.com/watch?v=-6uCRaI6Bql>



## 10. External parasites: Ticks



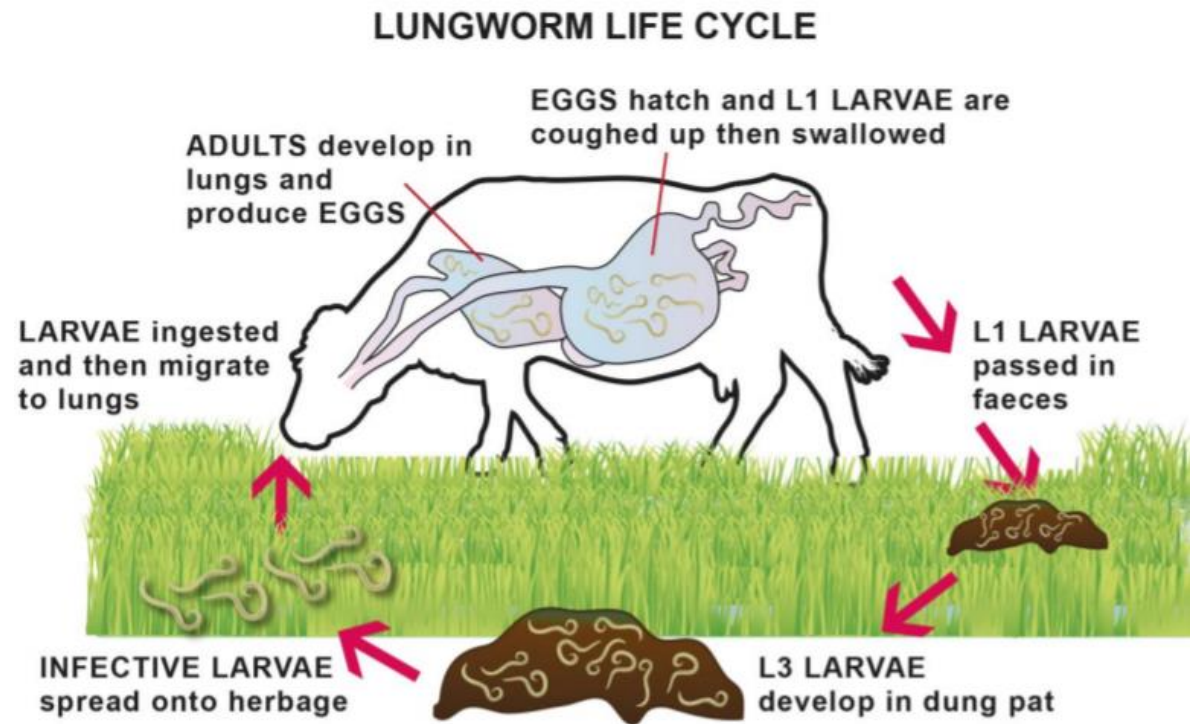
- Ticks cause Tick-borne diseases (TBD)
- Immediate treatments for Tick borne diseases is advised

**Tip:** Always check the package leaflet of prescribed veterinary drug(s) first before any use



## 11. Internal parasites: Lung worms

- Clinical signs;
  - Wide spread coughing
  - Loss of condition, getting skinny
  - Increased respiration rate
  - Difficulty in breathing
- High risk conditions include;;
  - i. Wet periods(summers)
  - ii. High stocking density
  - iii. Lack of immunity due to low exposure of infective larvae

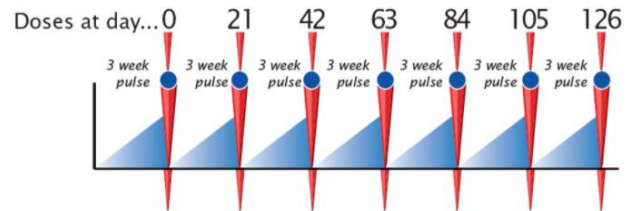


Further reading: <https://www.cattleparasites.org.uk/app/uploads/2018/04/Control-of-lungworm-in-cattle.pdf>

## 12. Internal parasites: Stomach worms

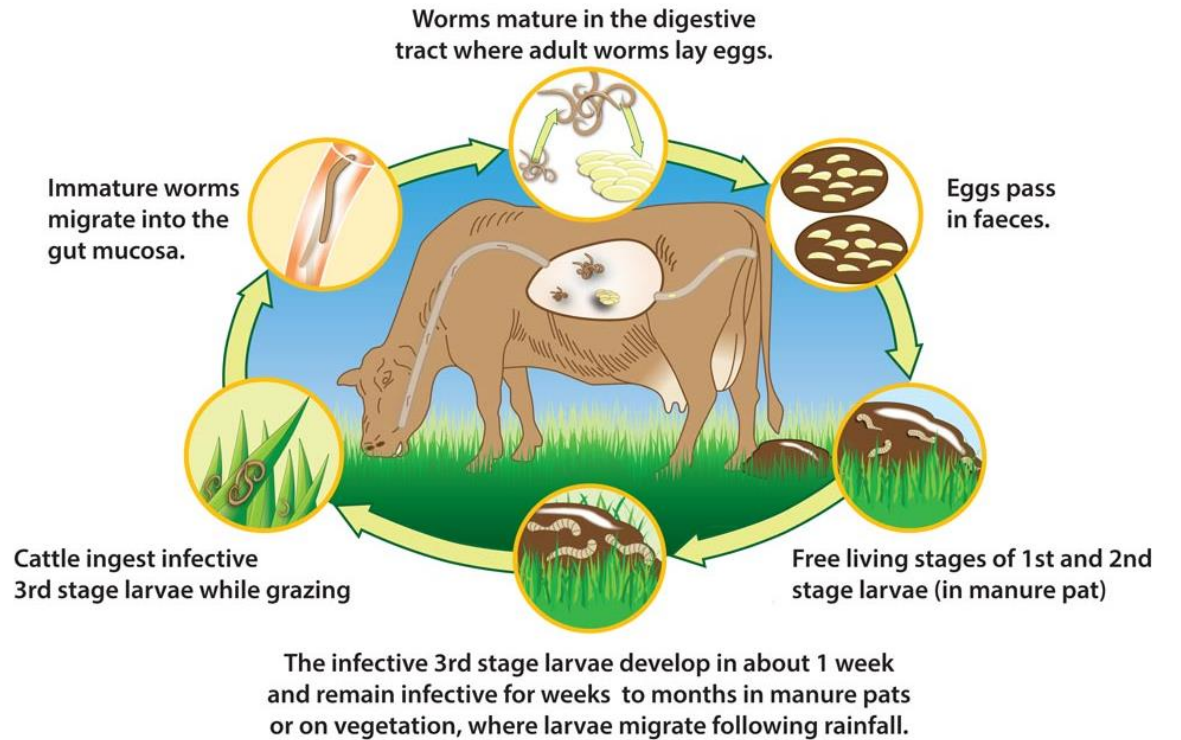
Clinical signs:

- Animal loses weight rapidly
- Profuse, watery and bright green scour
- Fluid swelling under the chin (oedema)



*Example of a pulse release worming bolus*

## Stomach Worm Life Cycle

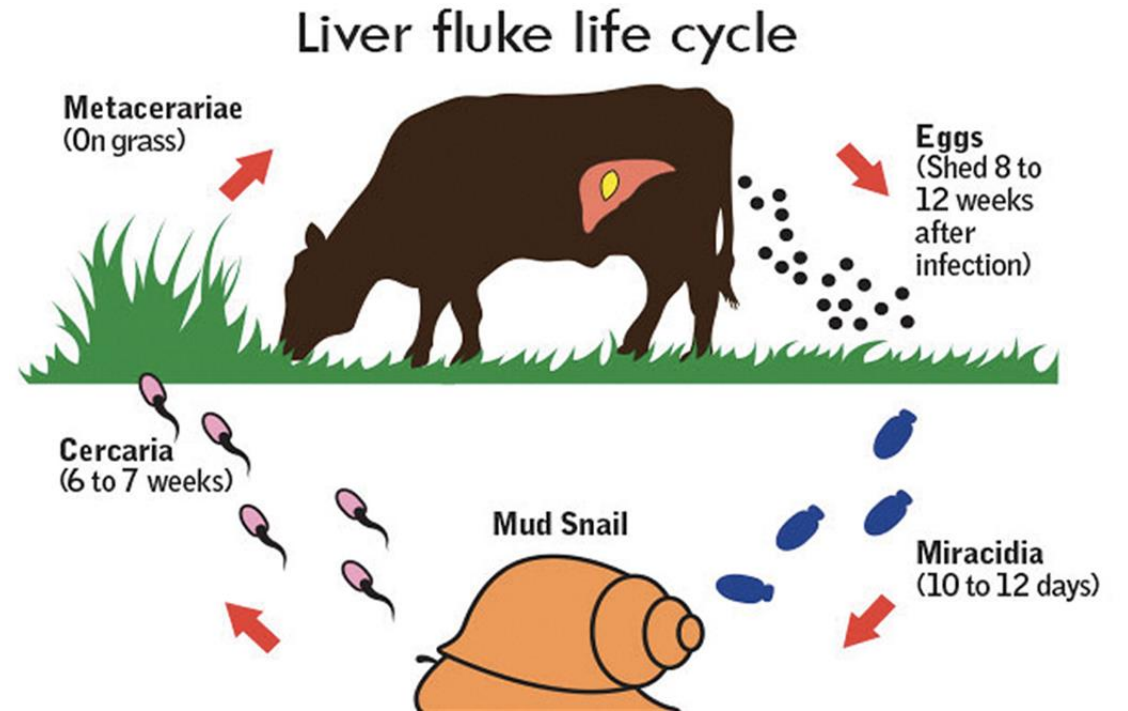


Watch:

<https://www.moredun.org.uk/research/diseases/parasitic-gut-worms-cattle>

## 13. Internal parasites: Liver flukes

- Clinical signs include:
  - Reduced liveweight gains through reduced feed conversion efficiency
  - Reduced milk yields
  - Reduced fertility
  - Anemia
  - Bottle jaw
  - Diarrhea
- Severe cases can lead to death.





## 13.1 Internal parasites: Liver flukes Cont'd...



*Environmental conditions where Liver fluke (mud snail) will easily survive (wet and muddy)*



Dry and clean environment, no chance for mud snail to survive

**- END -**