

*Theme 9: Animal Health*

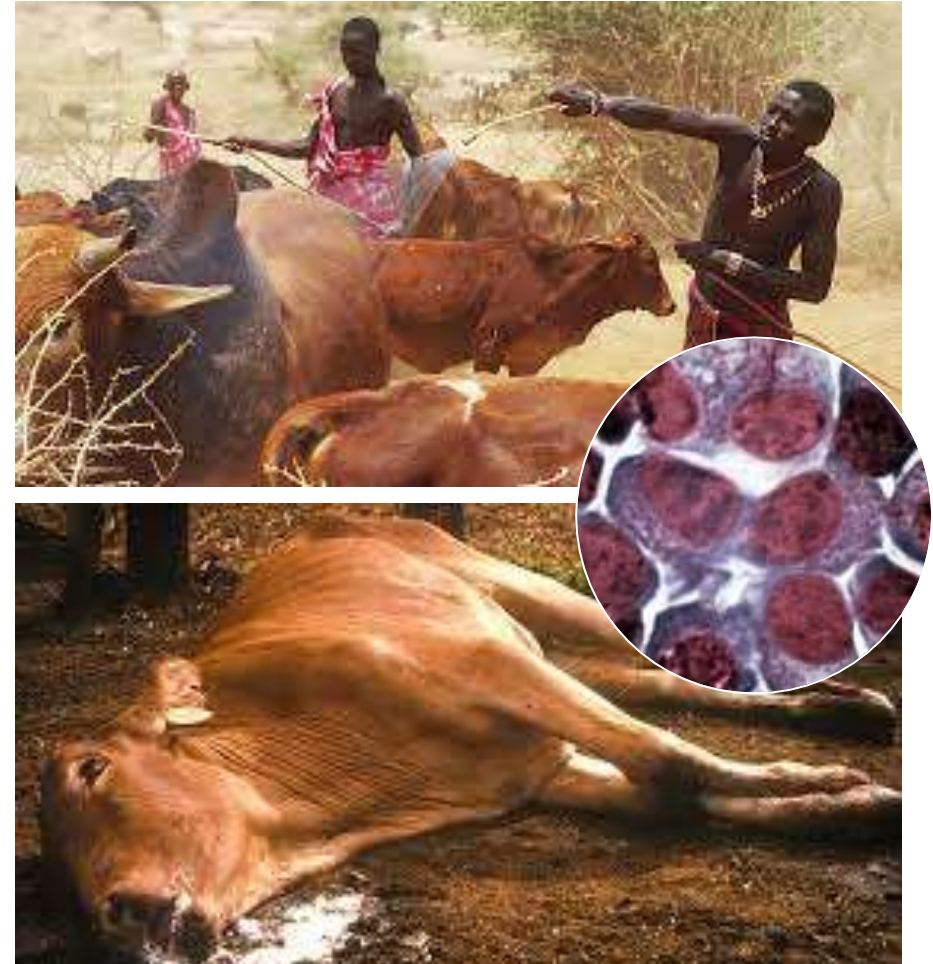
# INTRODUCTION TO ANIMAL HEALTH (PREVENTION VS CURATIVE HEALTHCARE) **Level 1**

Topic	Training & information Content
9.1	Introduction to Animal health (Prevention vs curative health care)
9.2	Health signals
9.3	Biosecurity of dairy farms
9.4	Tick born diseases (Prevention and treatment)
9.5	Worm infections (Prevention and treatment)
9.6	Vaccination schedule and planning
9.7	Mastitis prevention and treatment
9.8	California Mastitis Test
9.9	Usage and storage of veterinary medicines on dairy farms
9.10	Administering of medicines to dairy cows
9.11	Instruction use of injectors into teat canal
9.12	Key performance indicators (KPIs) for monitoring health status of dairy herd



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

- Types/kinds of diseases that affect cattle
- How cattle contract diseases
- How to prevent cattle diseases
- How to cure cattle diseases



East Coast Fever is one of the most devastating cattle diseases in East Africa.

## 2. Introduction

- To keep cattle healthy.
- Make sure they do not get sick (prevention).
- If they fall sick, start treatment immediately (cure).
- This presentation gives some general information on;
  - What kind of cattle diseases are there,
  - how do cattle contract them,
  - how can you prevent the diseases,
  - and if they contract them, how do you cure them?



Mastitis is an issue at nearly all dairy farms.



### 3. Types/Kind of diseases that affect cattle

- Basically there are three types of causes for cattle to get ill.
  - i. By germs
  - ii. By body disturbance
  - iii. Injury and intoxication



Nail eaten by cow penetrates stomach.

Sunburn is caused by an intoxication.



Foot & mouth disease is caused by an infection (virus).



## 4. Infectious diseases

- Infectious diseases are caused by sick-making small living things, such as;
  - i. Bacteria (germs)
  - ii. Viruses
  - iii. Parasites
  - iv. Fungi.



Womb infection is caused by a bacteria.



Ringworm is caused by a fungi.



Lumpy skin disease is caused by a virus.



## 5. Bacteria

Bacteria (germs) can cause diseases like:

- Udder infection
- Abortion
- Lung infection
- Womb/uterus infection
- Many lameness

Bacteria can cause abortion.  
After births spread bacteria.



Anthrax is one of the most deadly diseases and not only in cattle.



Different bacteria can cause udder infection.

## 5.1 Bacteria Cont'd...

In most cases cattle lameness is caused by bacteria not by injury.



Tuberculosis is caused by a bacteria which is also infectious for men. This is called a zoonosis.





## 6. Viruses

- Viruses can cause diseases like:
  - Foot and mouth disease
  - Lumpy skin disease
  - Lung problems
  - Calf scour (Rota/'Corona')



Most calf scours are caused by viruses.

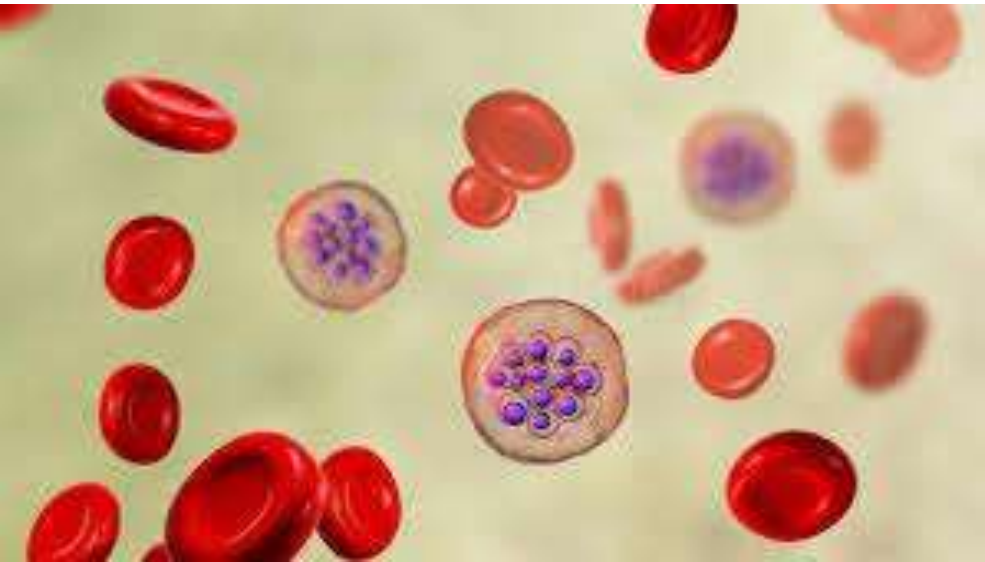


Lumpy skin disease.



## 7. Protozoa

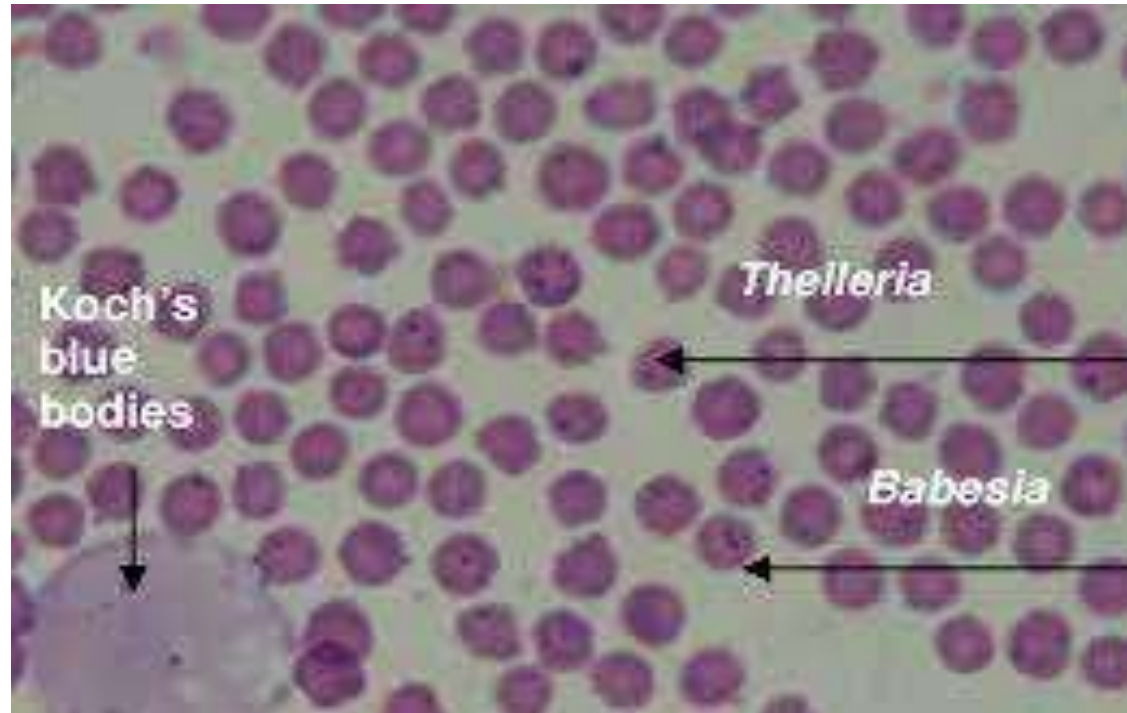
- Protozoa are parasites living in cells.
- Tick borne diseases are mostly caused by parasites.



The most (in)famous protozoon causes malaria (here in red blood cells).



The cause of East Coast Fever also lives in (white) blood cells.



Protozoal parasites live often in cells and can be diagnosed with blood smears.

## 8. Vectors

- A vector is another living organism what carries the disease from one animal to the other.
  - In the case of malaria these are mosquitoes.
  - In the case of ECF it are brown ear ticks.
  - In the case of Babesiosis it is also a tick.





## 9. Worms

- Two kinds of worms can cause problems in cattle;
  - Flat worms to be divided in fluke like worms and tapeworms.
  - Round worms.



## 10. Metabolic diseases

- These are diseases of cattle caused by lack of minerals (salts) or when feed can not meet the needs of the body.
- They are most of the times seen in extreme high yielding cattle, which a for the moment rare in East Africa.
- Examples are:
  - Milk fever (lack of calcium)
  - Stomach displacement.

Cow getting calcium infusion to treat milk fever.



Starting an abomasal surgery





## 11. Injuries and intoxications

- Injuries and intoxications are maybe not the most common diseases in cattle, but most of the time they are caused by human errors.



For an adult cow, a fractured leg is a one way ticket to the butcher.



Sunburn is caused by eating toxic plants.



Bacteria producing toxins can cause severe mastitis.

## 12. How to manage cattle diseases

- A disease free farm is impossible. So every dairy farmer needs to deal with diseases.
- Basically there are two things he or she can do.
  - Prevent animals from getting sick.
  - Cure animals who get sick.

By drenching you cure cattle from existing worm infections.



By giving medicine you try to cure the cow.



By spraying you prevent animals from getting sick.





## 13. Prevention of cattle diseases

- By preventing cattle diseases two things make the goals;
  - To increase the resistance of animals against diseases.
  - To lower the infection pressure of microorganisms causing cattle diseases.

Biosecurity measures you take to decrease infection pressure.



You vaccinate cattle to increase resistance.



Colostrum is necessary to get resistance.



## 14. Good dairy farming practices

The first step to a healthy herd is good dairy farming practice. Hence, have a day to day management in order like;

- Providing enough and clean drinking water.
- Feed animals properly.
- Have good milk technique.
- Give the necessary vaccinations.
- Avoid stress (of both farmer and animal).



Provision of clean drinking water many times per day to cattle is often not done properly.





## 14.1 Good dairy farming practices Cont'd...

A good milk technique is key to protect the teats.



Banana stem and Napier grass hardly have any feed value.



## 15. Lowering Infection pressure

- Lowering infection pressure aims for two things:
  - i. Make sure sick making germs do not enter the farm,
  - ii. Make live for sick making germs impossible or at least minimize the chances on survival.

Disinfection of the navel prevents bacteria to enter the new born calf.



Milking in a clean environment prevents udder infection.



Drying milk equipment kills bacteria.





## 16. Prevention versus cure

- The best way to keep cattle healthy is make sure they do not get sick.
- So prevention of diseases should be number one.
- If cattle get sick try to cure them as soon as possible.

Keep observing the health of your cattle.



A farmer is not a vet. Call for his expertise when needed.

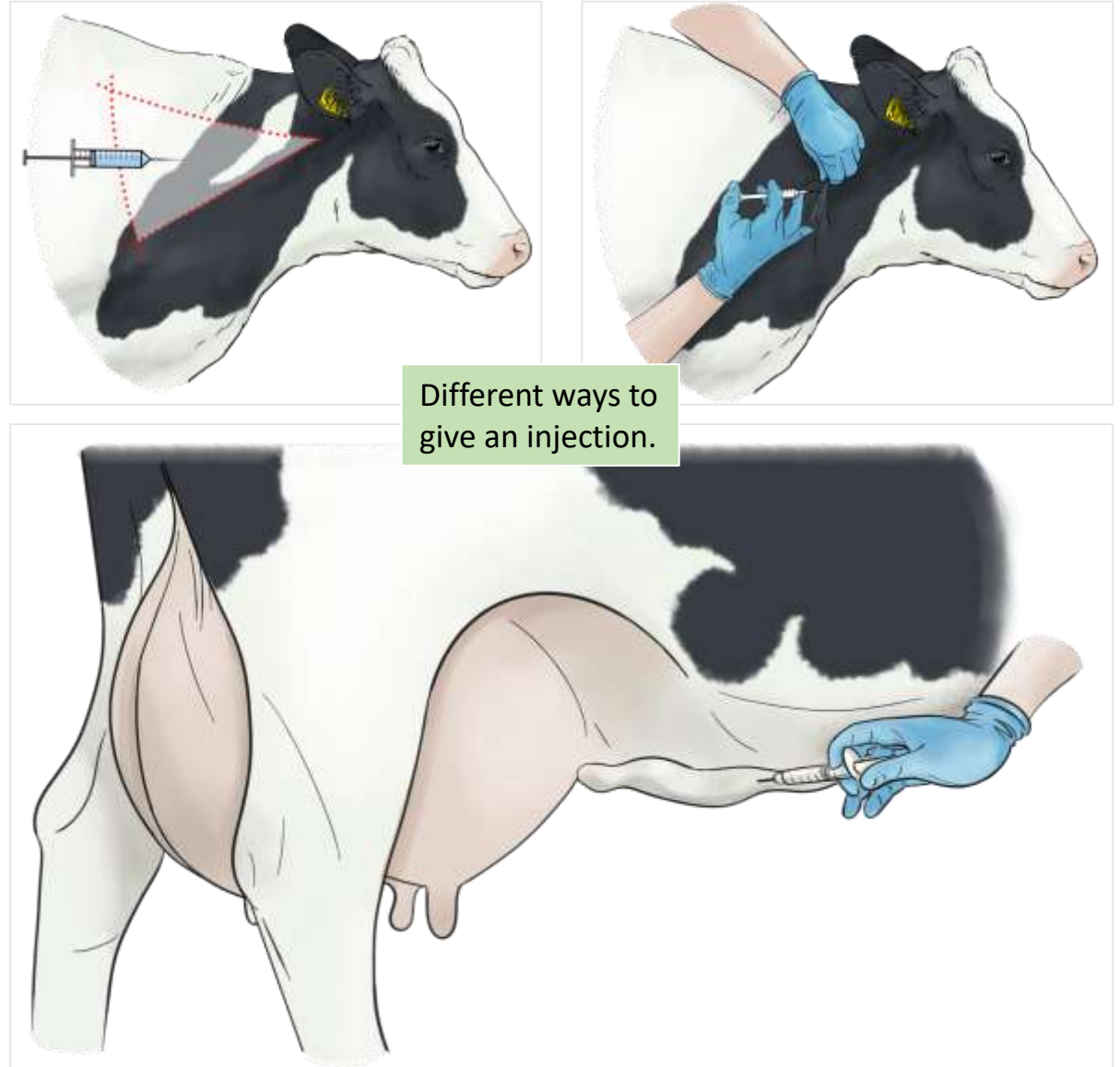


If playing doctor yourself do it right!



## 17. Prevention versus cure

- There are many ways to cure an animal.
- This is often done by giving medicines.
- Bandages can be used to treat wounds.
- Vets can do surgery.
- Most importantly:
  - Start treatment on time.
  - Make sure the diagnosis is correct.
  - Make sure you use the right medicine.
  - Do not hesitate to call an expert (vet).
  - Use only registered medicines.
  - Respect the medicine withdrawal time.





## 18. Summary: Take home messages

Prevention is better than cure!

- Animal health is complicated.
  - There are many diseases.
  - They have different causes.
  - They have different ways of prevention.
  - They have different treatments.

Experts can help to increase knowledge.



A healthy cow gives more milk.

