Important Tick-borne Diseases in Kenya

East Coast Fever

What is East Coast Fever?
It is a disease of cattle that causes high death rates in affected animals.

How do you control East Coast Fever?
1. By use of acaricides through dipping and spraying to kill the ticks at least once every week.
2. By treatment of sick animals. A variety of drugs for treatment are available commercially.
3. Failure to control the disease causes death.

How is it transmitted?
It is transmitted by the brown ear tick.

How do you recognize it?
The animal has enlarged lymph nodes.
Laboured breathing.
Frothing from nostrils and mouth.
Severe drop in milk production.

Can cattle be vaccinated against East Coast Fever (ECF)?
Kenya Agricultural and Livestock Research Organization together with other development partners has developed a vaccine against ECF.

Babesiosis

It is a disease of cattle characterised by anaemia and haemoglobinuria.

How is it transmitted?
Transmission is by the one host tick *Boophilus decoloratus* and *Boophilus microplus*.
*B. bovis* is transmitted exclusively by *B. microplus*.
*Babesia* ssp are transmitted transovarially to the larvae which in turn transmit the parasite to the host in the case of *B. bovis* and to the nymphs in the case of *B. bigemina* which in turn transmit to the host.

How do you recognize it?
By Clinical Signs:
- Fever
- Anaemia
- Blood in Urine (dark red/brown)
- Increased respiratory rate
- Weakness
- Nervous signs only in *B. bovis*
- Presence of organisms in blood smears

How Do You Control It?
- Eradication of the vector (Acaricides)
- Immunisation (infected blood, attenuated organism)

Treatment
- Deminazines
- Quinoronium derivatives

Anaplasmosis

It is a disease of cattle characterised by anaemia and icterus.

How is it transmitted?
Transmission is by the one host tick *Boophilus decoloratus*.

How do you recognize it?
By Clinical Signs:
- Rise in body temperature
- Reduced feed intake
- Anaemia
- Hard feaces in some cases
- Presence of anaplasma bodies in blood smears
- Abortion in some cases
- Recovered animals remain carriers

How Do You Control It?
- Eradication of the vector
- Immunisation (infected blood, attenuated organism)

Treatment
- Tetracyclines
- Imidocarb dipropionate (Imizol)

Heartwater

What is Heartwater?
The disease is caused by an obligate intracellular parasite *Ehrlichia (dria) ruminantum*.
The disease is characterised by nervous signs.

How is it transmitted?
The parasite is transmitted by the ticks of the genus *Amblyoma* spp.

How do you recognize it?
By Clinical Signs:
- Dullness
- Incordinated gait
- Cycling
- Difficult in breathing
- Diarrhea
- Sudden death
- Hydrothorax / hydropericardium
- Demonstration of the organism in brain crush smears

How Do You Control It?
- Eradication of the vector (Acaricides)
- Immunisation (infected blood)

Treatment
- Tetracyclines in the early stages

These diseases are endemic in Kenya Compiled by S.G. Ndungu, E. Ouma and M. Maichomo 2017.