



Kenya Climate Smart
Agriculture Project

How to Identify and Control Goat Pneumonia (CCPP) for Improved Productivity



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What is Contagious Caprine Pleuro-pneumonia?

Contagious Caprine Pleuro-pneumonia (CCPP) is one of the major Trans-boundary Animal Diseases (TADs) affecting goat production in pastoral areas. The disease is caused by a bacteria called *Mycoplasma capricolum* subspecies *capripneumoniae* (Mccp), which is highly contagious and is easily spread through air droplets. The disease affects susceptible goats that are exposed and kills between 80% to 100% of the infected goats.

Outbreaks of the disease occur mainly in flocks kept by communities in arid and semi-arid areas (ASALs) where goats are an important source of livelihood. The disease is common during seasons when temperatures are low.

Almost every community has a local name for the disease (for example *Orkipei* among the Maasai, *Mabui* among the Kamba, and *Lokoi* among the Pokot).

Common clinical signs of CCPP

Contagious Caprine Pleuro-pneumonia should be suspected in goats that display the following signs:

- Weakness/Lagging
- Coughing
- Salivation (stringy)
- Nasal discharge
- Difficulty in breathing (open-mouth breathing)
- Shade seeking as a sign of fever (41° C or more)



Sick goats showing clinical signs of CCPP

How CCPP spreads

Susceptible goats get infected through;

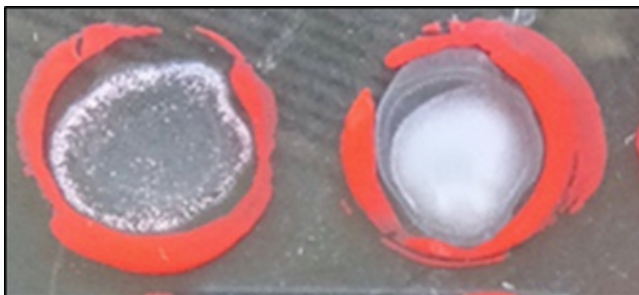
- Introduction of goats that may be infected with the disease into the flock, especially new purchases from markets and neighbours
- Mixing of goats during transportation and housing
- Sick goats and sheep flocking together during periods of stress such as cold temperatures during heavy rainfall periods
- Contact with sick goats in communal grazing areas and watering points



Crowding of goats at the watering point

How to identify CCPP

Contagious Caprine Pleuro-pneumonia affects goats of all ages and sex. Diagnosis can be made based on the clinical signs and laboratory tests. A rapid pen-side Latex agglutination test (LAT) is available for field detection which is useful in making decisions on the animals to isolate and those to be vaccinated.

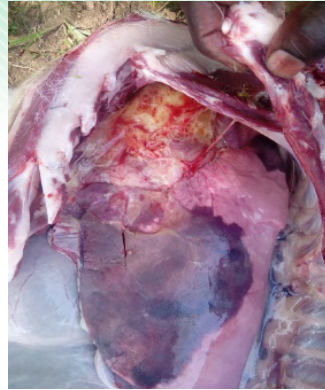
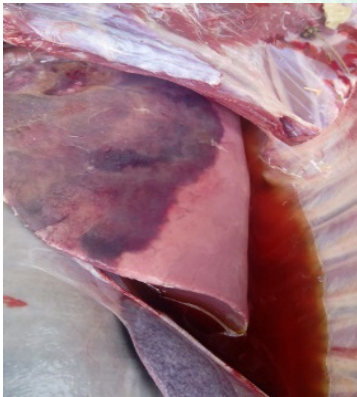


CCPP detection using LAT

Postmortem findings

The following are usually observed in goats that have died of CCPP:

- Lung lesions affecting one side of the lung in most cases
- Attachment of the affected lung to the rib cage depending on the stage of the disease
- Increased volumes of straw-coloured pleural fluid
- Hepatized (liver-like) lung tissue



Lesions observed in goats dying from CCPP

Prevention of CCPP

(i) Biosecurity

The following biosecurity measures are important in the prevention of the disease.

- Controlling movement of goats to avoid mixing of flocks
- Separation of sick goats from the healthy flock

- Seeking the services of veterinary personnel for prompt treatment of sick goats
- Avoid the introduction of goats from farms or markets without due diligence of the disease
- Ensuring appropriate goat housing



A fenced boma for housing goats

(ii) Vaccination

Vaccination is the most effective method of ensuring goat herds remain free from the disease. A vaccine (Caprivax™) against the disease is available and can be sourced from the Kenya Veterinary Vaccines Production Institute (KEVEVAPI) for use in protecting healthy goats in areas where CCPP occurs. Goats are vaccinated annually to effectively ensure the flocks stay free from CCPP.



A goat being vaccinated against CCPP

(iii) Treatment of goats with CCPP

Sick goats are treated using a range of antibiotics. However, this is not recommended as it does not eliminate the *Mycoplasma* and recovered goats become carriers of the causative agent which easily gets transmitted to healthy goats.

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