

ABORTION SHEET

Q FEVER



www.cepoq.com

●● Sheep and goats



Source : dico-sciences-animales.cirad.fr

**Q FEVER IS A ZONOTIC DISEASE OF BACTERIAL ORIGIN PRESENT ALL OVER THE WORLD.
THE MAIN DOMESTIC RESERVOIR OF THIS BACTERIUM IS RUMINANTS.**

AGENT INVOLVED ●●

Q fever is caused by a bacterium called *Coxiella burnetii* that has a worldwide distribution with the exception of New Zealand and Antarctica. This disease is endemic and the seroprevalence increases with herd size. It is higher in dairy farms than in meat-producing farms. The bacterium is extremely persistent in the environment.

TRANSMISSION ●●

Although several animal species can be infected with *C. burnetii* (including birds and domestic carnivores), ruminants are often the main cause of its transmission to humans. Livestock management with accumulated bedding and solid manure may partly explain why small ruminant farms are particularly affected. Handling and application of manure contributes to the spread of the bacterium in the environment in the form of aerosols. Humans living or traveling within a few kilometers of infected herds are therefore at greater risk of becoming infected.



Source : Dr. John M. King, Cornell University College of Veterinary Medicine

Above : placenta of a sheep with Q fever.

CLINICAL SIGNS ●●

Animals infected with the bacteria are very often asymptomatic. If it is symptomatic, the main clinical manifestations are late-term abortions, stillbirth, anorexia and metritis. Whether the infected animal is asymptomatic or not, it can excrete bacteria in birth products (placenta, aborted fetus, liquids) as well as in feces. The bacteria can also be found in urine and milk, but these excretion routes are of lesser importance in the transmission of the disease.

DIAGNOSTIC ●●

It is essential to send placentas and aborted fetuses to the laboratory for a complete necropsy. In addition to determining the cause of abortion, the analysis can characterize the risk of transmission to humans.

TREATMENT ●●

Since antibiotics do not prevent the excretion of the bacteria and thus do not reduce the risk of transmission to humans, it is not recommended to institute an antibiotic treatment during a Q fever outbreak in a farm.

Herd vaccination is a better approach since it helps control abortions and reduces the shedding of the bacteria, thereby reducing the bacterial burden in the environment. The vaccine (COXEVAC®) is not registered in Canada, but it is possible to obtain a restricted import permit (from the Canadian Food Inspection Agency).

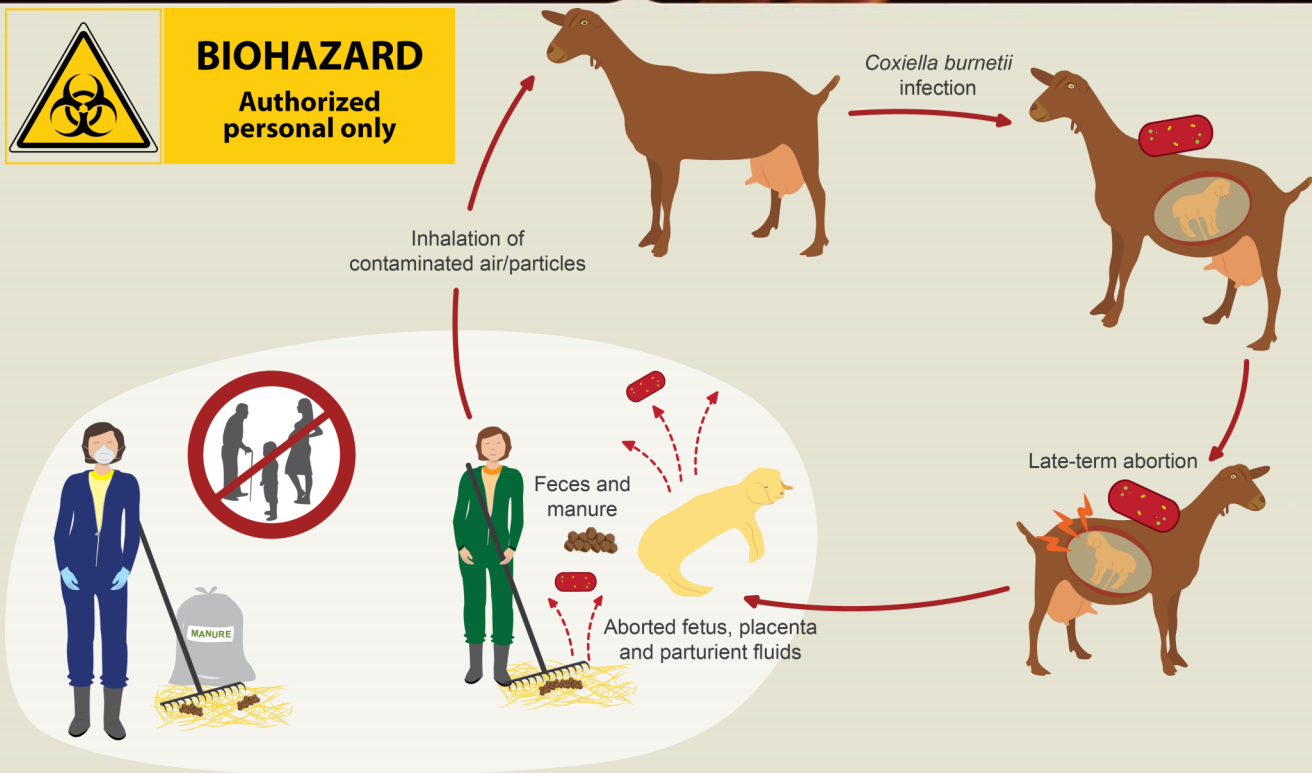
SOME FACTS ABOUT Q FEVER :

- ◆ The main mode of transmission is by inhalation of contaminated aerosols: fine particules suspended in the air ,transported on clothing or other vectors;
- ◆ One gram of infected placenta can contain up to 1 billion bacteria;
- ◆ A single bacterium is enough to infect a human by inhalation;
- ◆ The bacterium can survive many months in the environment or on wool.

Diagram of the contamination by the bacterium *Coxiella burnetii*



BIOHAZARD
Authorized personal only



PREVENTION ●●

To prevent transmission in a herd and to humans :

- ◆ Isolate aborted females for at least 3 weeks and keep an appropriate biocontainment of this section;
- ◆ Adequately dispose of abortion waste (in accordance with the regulations in place) :
 - ◇ Put it with household garbage after placing the products in a double sealed garbage bag;
 - ◇ Bury it (75 m from a stream and 150 m from a drinking water intake, and cover carcasses with caustic lime and two feet of soil);
 - ◇ Compost it in adequate installations.
- ◆ Maintain proper hygiene in parturition areas;
- ◆ Ensure that manure piles remain moist to limit dust formation;
- ◆ Let the manure compost for at least 90 days before applying on land;
- ◆ Avoid applying manure and transporting small ruminants when the weather is dry and windy;
- ◆ Bury the manure immediately after it has been applied on land.

WARNING ZOOONOSIS!

Q FEVER IS A ZOOONOTIC DISEASE AND IS THEREFORE TRANSMISSIBLE TO HUMANS.

Clinical signs in humans resemble flu-like symptoms : fever, severe headache, feeling of discomfort, nausea, muscle pain, etc. Q fever can also cause abortions in pregnant women, and atypical pneumonia, hepatitis and endocarditis in a small proportion of those infected.

PREVENTION OF TRANSMISSION TO HUMANS:

- ◆ Handling and destruction of parturition (or abortion) products should be done safely : wearing disposable gloves and N-95 mask, disposition of these products should be done in accordance with the regulations in place;
- ◆ Limit visitors' acces to the facilities during parturition periods (prohibit during abortions), especially children, pregnant women, the elderly and people with compromised immune system;
- ◆ Be vigilant when consuming raw milk products.



IMPROVE HYGIENE MEASURES ON THE FARM :

- ◆ Wash hands after contact with contaminated material or animals;
- ◆ Change out of clothes and boots before leaving the farm;
- ◆ Wash farm clothes separately (hot water);
- ◆ Avoid wearing these clothes in the house or in public places.

*** These measures are especially **IMPORTANT** during parturition and abortion episodes ***

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Growing Forward 2
A federal-provincial-territorial initiative

Canada

Québec

Translation: Saskatchewan Sheep Development Board thanks to funding from Growing Forward 2, a Canada and Government of Saskatchewan initiative. I Thank you to Ms. Corlena Patterson of the Canadian Sheep Federation for the review.