

Is Q Fever hiding on your farms?



One out of two farms could be at risk of Q Fever

Q Fever is a dangerous threat for you and your farms.
Protect your farms, their profit and human health.



COXEVAC®

Vaccinate now



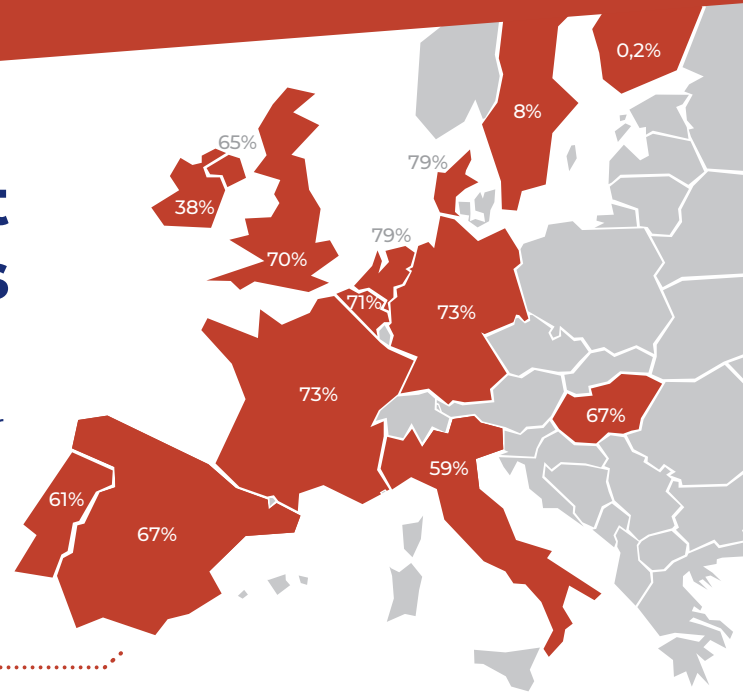
Q Fever

A potential threat to your farms



With more than **one out of two herds** testing positive for Q Fever (in some areas of the UK), farmers can no longer afford to ignore this disease^{1,2}

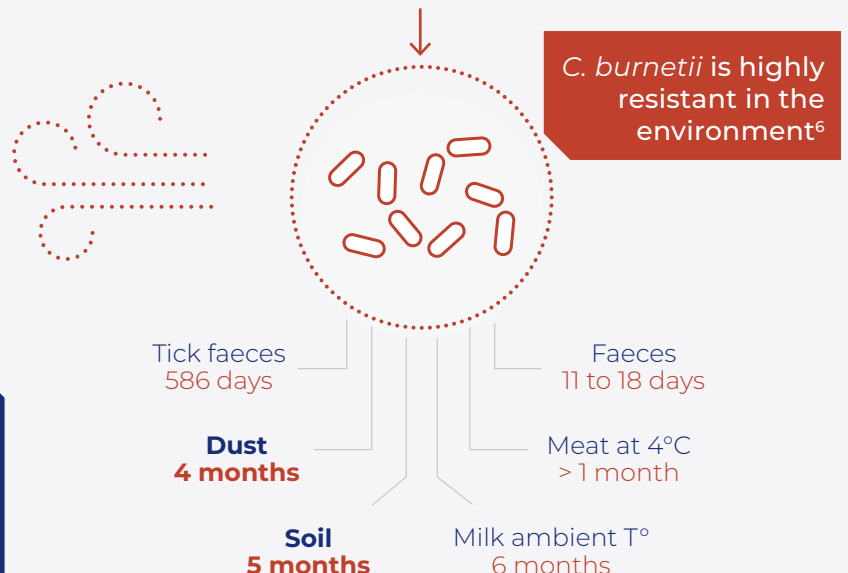
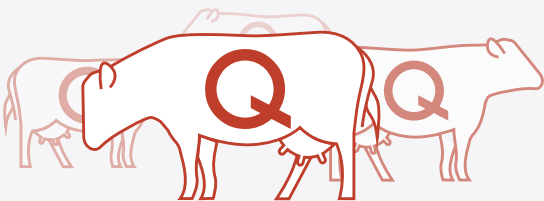
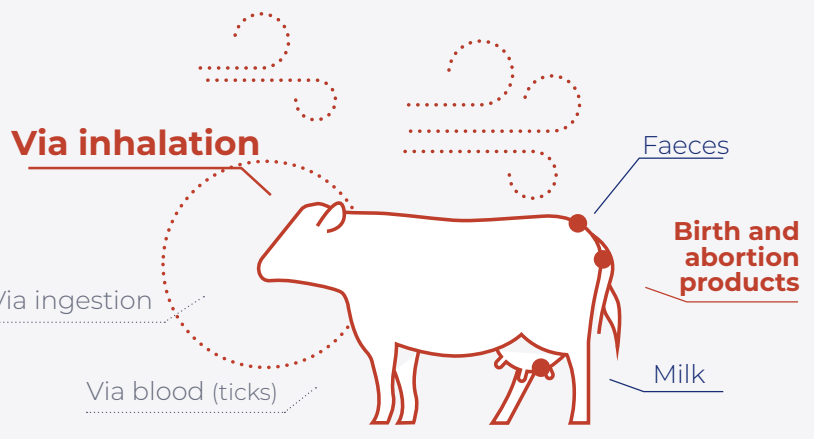
The values per country indicate the percentage of herds that tested positive to Q fever. Herd prevalence was determined by ELISA or PCR on bulk tank milk³.



Coxiella burnetii: Born to create trouble

Cattle are mainly infected by breathing in air particles contaminated with the bacteria.

Infected cows, even if asymptomatic, **shed *C. burnetii* mainly through birth or abortion products**, but also in vaginal mucus, faeces and milk⁴.



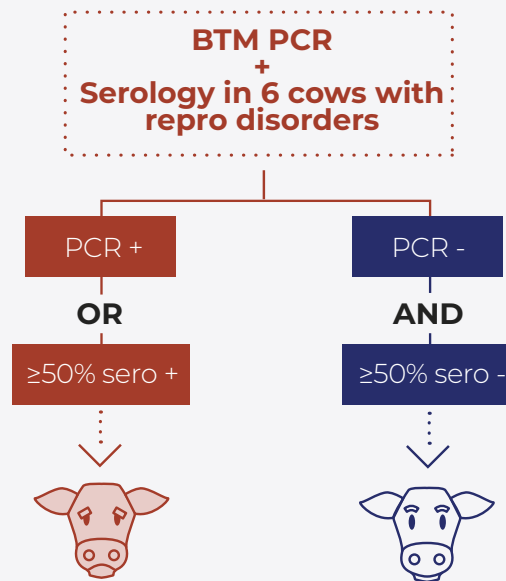
DID YOU KNOW ?

C. burnetii is able to travel up to 11 m carried by the wind and infect other herds in the process⁵

.....DIAGNOSTIC FLOW CHARTS

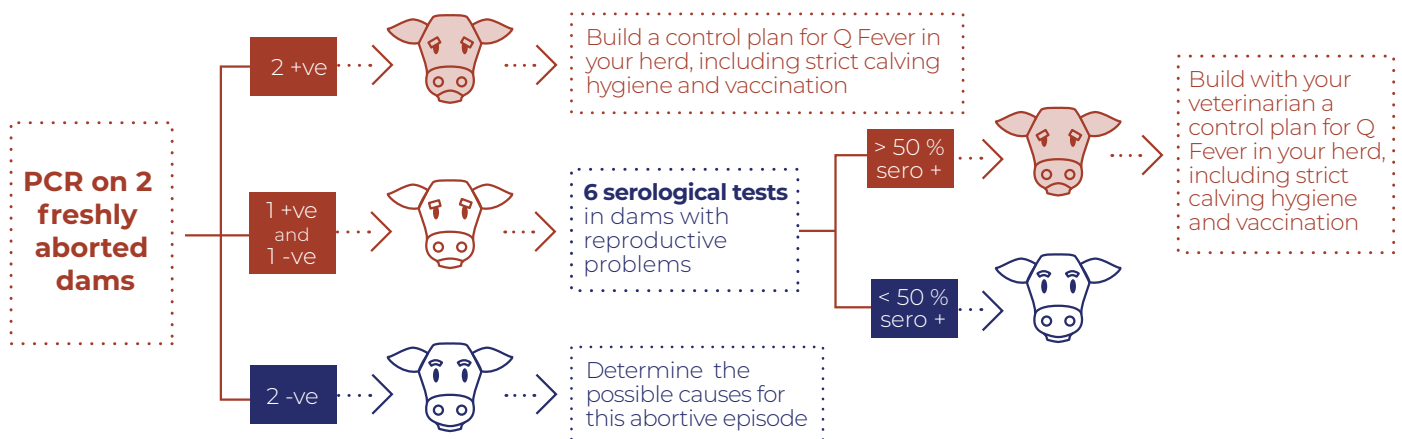
REPRODUCTIVE DISORDERS

Icons represent the herd status.



ABORTIVE EPISODES

Icons represent the herd status and dotted boxes represent actions and recommendations.



Q Fever is very likely the cause of abortions and present in the herd



Q Fever is involved in the cause for the abortions but further analysis are needed



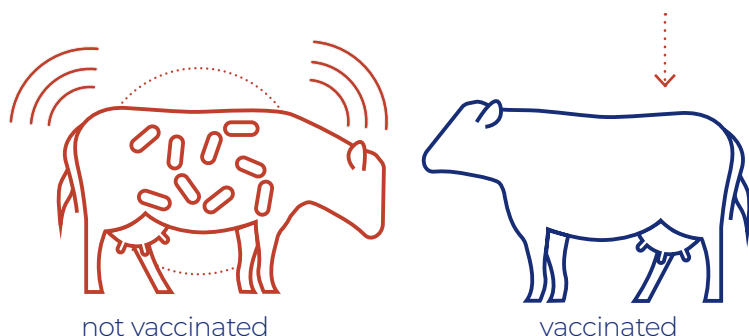
Q Fever is probably not responsible for the repeated abortions

COXEVAC[®]

.....A unique vaccine that effectively reduces bacterial load

5 times lower

risk of becoming a shedder - if naive and vaccinated before being serviced⁷



DID YOU KNOW ?

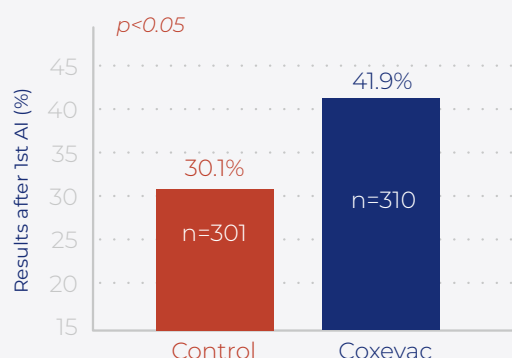
Coxevac is the only ultra-purified phase I *C. burnetii* vaccine endowing an optimal cellular and humoral immune response

.....helps tackle the reproductive impacts of Q Fever

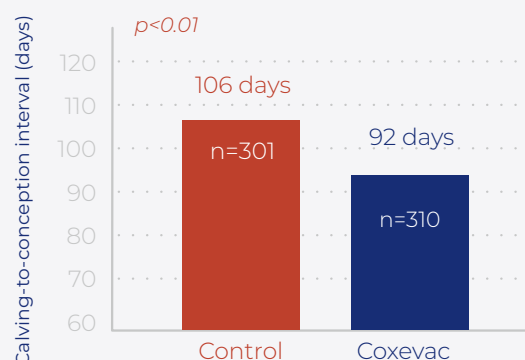
30% less risk of abortion⁸



40% increase in pregnancy rate at 1st AI⁵



2 weeks less to become pregnant⁵



Vaccination could represent a gain of £56/cow/lactation, just considering the reduction in days open



£4 OPEN DAY COST¹⁰

14 days



£56

/



.....A risk to the reproductive performance of herds



DID YOU KNOW ?

- o A seropositive cow to Q fever has 2.5 times more risk of abortion and 1.5 times more risk of retained placenta⁸
- o Herds with a positive bulk tank milk have 2.5 times greater risk to have a high incidence of metritis and endometritis¹¹

DO YOU
RECOGNISE
THESE SIGNS?

Weak newborn
Stillbirth
Premature calving
Infertility
Abortion
Retained placenta
Metritis

.....A serious threat to farm profitability

Any decrease in the herd reproductive performance **strongly impacts farm profitability**



cost of an extra day open¹⁰

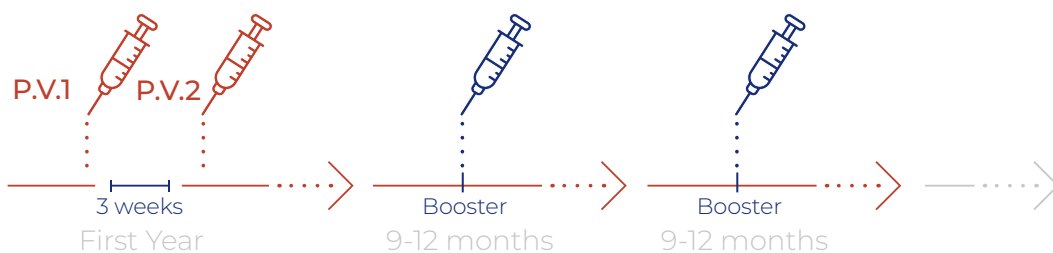


cost of an abortion¹²

.....Q Fever is zoonotic

Professionals like vets, farm advisers, farmers or abattoir workers are at increased risk of contracting Q fever. In most human cases it will remain asymptomatic. In 40% of cases, an acute disease will occur as a flu-like syndrome, miscarriage can occur in pregnant women. In 2% of cases, it will become chronic and can lead to hepatitis and/or endocarditis.

Protect your farms¹³, vaccinate !



P.V.1 1st primary vaccination injection
P.V.2 2nd primary vaccination injection

Vaccine dose

 4 ml in cattle
 2 ml in goats



References: **1.** Velasova M. *et al.* 2017. Herd-level prevalence of selected endemic infectious diseases of dairy cows in Great Britain. *J. Dairy Sci.* 100:9215–9233. • **2.** Valergakis G. *et al.* 2012. *Coxiella burnetii* in bulk tank milk of dairy cattle in south-west England. *Vet Record* 11;171(6):156, 1–2. • **3.** Guatteo R. *et al.* 2011. Prevalence of *Coxiella burnetii* infection in domestic ruminants: A critical review. *Veterinary Microbiology* 149 (2011) 1–16. • **4.** Guatteo, R. *et al.* 2006. Shedding routes of *Coxiella burnetii* in dairy cows: implications for detection and control. *Vet. Res.* 37, 827–833. • **5.** Hawker JI. *et al.* 1998. A large outbreak of Q fever in the West Midlands: windborne spread into a metropolitan area? *Commun Dis Public Health.* 1998; 1:180–74. • **6.** Clark N.J. and Soares Magalhães RJ. 2018. Airborne geographical dispersal of Q fever from livestock holdings to human communities: a systematic review and critical appraisal of evidence. *BMC Infect Dis.* 2018 May 15;18(1):218. • **7.** Guatteo R. *et al.* 2008. Prevention of *Coxiella burnetii* shedding in infected dairy herds using a phase I *C. burnetii* inactivated vaccine. *Vaccine.* 26(34):4320–4328. • **8.** Ordonneau, S., 2012. Impact de la vaccination et de l'antibiothérapie sur l'incidence des troubles de la reproduction et sur la fertilité dans des troupeaux bovins laitiers infectés par *Coxiella burnetii*. INRA - ONIRIS, 1300 BioEPA Biologie, Epidémiologie et Analyse du Risque. Centre de Recherche Angers-Nantes, Nantes, France. • **9.** Lopez Helguera, I. *et al.* 2014. Vaccinating against Q-fever with an inactivated phase-I vaccine (COXEVAC®) improves reproductive performance in *Coxiella burnetii*-infected dairy herds. Presented at the XXVIII World BuiatricsCongress, Cairns, Australia 2014, pp. 274–275. • **10.** Cabrera, V.E., 2014. Economics of fertility in high-yielding dairy cows on confined TMR systems. *Animal* 8 Suppl 1, 211–221. • **11.** Valla, G., 2014. Prevalenza di *Coxiella burnetii* nel latte di massa in allevamenti di bovine da latte italiani e possibile correlazione con problemi riproduttivi. *Large Animal Review* 51–56. • **12.** Cabell E. 2007. Bovine abortion: aetiology and investigations. In *Practice* 29, 455–463. • **13.** Courcoul, A. *et al.* (2011). Modelling effectiveness of herd level vaccination against Q fever in dairy cattle. *Veterinary research*, 42(1), 68.

COXEVAC® suspension for injection for cattle and goats contains inactivated *Coxiella burnetii*, strain Nine Mile ≥ 72 QF Unit*/ml. *Q-fever Unit: relative potency of phase I antigen measured by ELISA in comparison with a reference item. **INDICATIONS:** Cattle: For the active immunisation of cattle to lower the risk for non-infected animals vaccinated when non-pregnant to become shedder (5-times lower probability in comparison with animals receiving a placebo), and to reduce shedding of *Coxiella burnetii* in these animals via milk and vaginal mucus. Onset of immunity: not established. Duration of immunity: 280 days after completion of the primary vaccination course. Goats: For the active immunisation of goats to reduce abortion caused by *Coxiella burnetii* and to reduce shedding of the organism via milk, vaginal mucus, faeces and placenta. Onset of immunity: not established. Duration of immunity: one year after completion or the primary vaccination course. **Legal Category:** UK [POM-V] IE [POM] Please refer to the product packaging and leaflets for information about side effects, precautions, warnings and contra-indications. Further information is available from the product SPC, data sheet or pack insert.

Prescription decisions are for the person issuing the prescription alone. Use medicines responsibly (www.noah.co.uk/responsible)

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