



Ministry of Economic Affairs,  
Agriculture and Innovation

# Q fever in the Netherlands

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# Introduction

- Disease situation, goat farms and human
- Measures taken in 2010 and before
- Vaccination
- Current approach
- EU co-financed research





# Disease situation

Infected farms in the Netherlands:

- Number of positive farms until Sept 2011: **4** (bulk milk positivity, no abortion storms)

Human cases:

- 2011 (until Sept) : 73
- 2010: 504, 2009: 2,355, 2008: 982, 2007: 195
- No clustering: seasonal and regional
- More medical attention



# Measures taken in 2010 and before

- Notification high abortion rates
- Bulk milk monitoring
- Restrictions re visitors
- Manure blocked – to be composted
- Compulsory vaccination
- No enlargement farms
- Transport restrictions
- Infected farms: culling of pregnant animals and breeding ban (2010)





# Vaccination

- Coxevac, produced by CEVA
- Voluntary -2008
- Compulsory in high risk areas -2009
- Compulsory for the whole Netherlands
  - 2010 and further
  - Large dairy-goat and dairy-sheep farms (>50 animals)
  - Farms with 'public function'
- Two vaccinations (3 weeks) and annually
- Before pregnancy





# Current approach

- Crisis management -> risk-based
- Notification duty, free status after 1 year negative bulk milk
- Stop enlargement ban
- Release restrictions re visitors
  - Hygiene measures
  - Around lambing
- Manure blocked for 30 days
- Breeding ban remains for animals on infected farms (2010)





# EU co-financed research

- Commission Decision 2011/89/EU
- Six study projects on epidemiology of Q fever and effectiveness of control measures
- Interim reports
- Central Veterinary Institute, Wageningen UR and partly Animal Health Service (project 5) and TNO (project 6)

## 1: “Q-fever in goats”

- To develop effective intervention strategies
  - 5 Goat Q fever strains, one sheep- and one human Q fever strain are isolated
  - Genotyping of outbreak stains showed that 90% represent one genotype. This genotype probably played a key role in the Dutch Q fever outbreak (Roest et al, Emerging Infectious Diseases, 2011)



## 2: “Assessment of the virulence of *C. burnetii* strains in goats”

- To define whether the Dutch strain in goats is more virulent than other *C. burnetii* strains
  - Project is finished and a report is available in Dutch
  - Differences in virulence between strains and also within one genotype
  - Interpretation is difficult

## 3: “Pathogeneses of Q-fever”

- To understand the pathogenesis of *C. burnetii* infections in goats
  - Tests of the measuring of the cell mediated immunity are optimized and will be used in an animal experiment
  - Will take another 1.5 year



#### **4: “Inventory of Q-fever strains in cattle, mutton sheep, dogs and cats”**

- To underpin the relation between Q-fever patients and animal sources
  - During the period April till July 2011 placenta material is collected. In the next three month these materials will be analysed

#### **5: “Effectiveness of vaccination”**

- To gain information on the effectiveness of the CEVA Santé Animale vaccine
  - Report is available
  - Relatively mild side effects, especially in Q fever positive herds: rise in temperature and local reactions, feed intake not reduced and milk yield only very slightly decreases



## 6: “Search for suitable means of disinfection”

- To gain information on suitable products for disinfection and whether materials like wood, straw, ground and manure can be effectively disinfected
  - In a workshop experiences of disinfection of goat stables are exchanged
  - In a model disinfection preparation are compared; 2 preparations seem to be working
  - These preparations will now be tested on materials present in the stables such as wood and concrete

