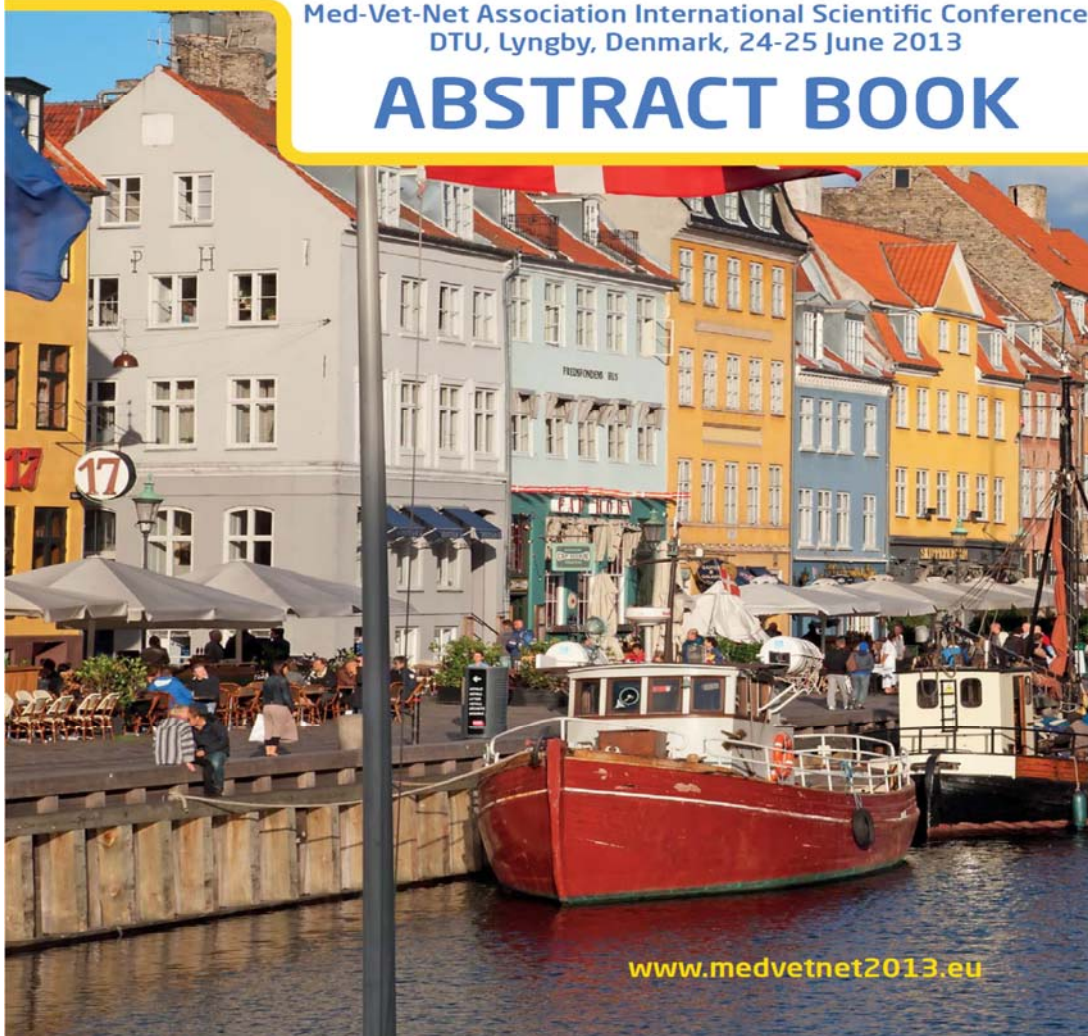




Med-Vet-Net Association International Scientific Conference
DTU, Lyngby, Denmark, 24-25 June 2013

ABSTRACT BOOK



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Morroy, G., M.A.P.M. van Asseldonk, D.M. Bontje, J.A. Backer, H.I.J. Roest, H.J.W. van Roermund, R. Bergevoet, J. Prins, W. van der Hoek, and J. J. Polder (2013). The societal costs of Q fever in Dutch dairy goat herds: evaluation of past and future control strategies. In Med-Vet-Net Association International Scientific Conference DTU, Lyngby, Denmark, 24-25 June 2013: Abstract Book (pp 14). Lyngby, Denmark.

KN03*: The societal costs of the Dutch Q fever outbreak: evaluation of past and future control strategies

G. Morroy¹ and M.A.P.M. van Asseldonk²

1 Municipal Health Service, Infectious diseases, Den Bosch, The Netherlands

2 Economic Agricultural Research Institute (LEI) of Wageningen UR, Wageningen, The Netherlands

Background

In the Netherlands, more than 4,000 human Q fever cases, including 25 fatalities, were notified during the 2007–2010 Q fever outbreak. Veterinary control measures were introduced reluctantly, late and gradually, fearing economic damage to the sector. However, within three years 60,000 dairy goats were culled.

Past lessons

Accounting for 85%, human costs are spread over a decade whilst veterinary costs are proportionally small and immediate. Humans develop late complications such as Q fever fatigue syndrome or chronic Q fever, which negatively affects quality of life and productivity.

Future

By analysing disease dynamics, we developed a Q fever transmission model. Compared to culling or breeding bans for Q fever infected dairy goat farms, costs of retaining the preventative vaccination programme are relatively low. This vaccination programme on Q fever free farms is preferred if the probability of re-infection exceeds once every 15 to 20 years. Only the absence of *Coxiella burnetii* from both livestock and the environment would warrant a return to non-vaccinated herds. Unfortunately, much remains unknown on the probability and mechanisms of re-infection of goat herds.

Conclusion

Q fever poses a serious long-term burden on patients and society. The real impact of a zoonosis outbreak only becomes apparent when combining human health, societal and veterinary costs. Veterinary costs are immediate, apparent and proportionally small. Due to a trickle-down effect over a decade, human cost and societal implications are underestimated. Finding the balance between economic livestock interests and human health remains a challenge when dealing with outbreaks of zoonotic diseases.

Co-authors:

D.M. Bontje, J.A. Backer, H.I.J. Roest, H.J.W. van Roermond. Central Veterinary Institute (CVI) of Wageningen UR, Lelystad, The Netherlands.

R.H.M. Bergevoet, Economic Agricultural Research Institute (LEI) of Wageningen UR, Wageningen, The Netherlands.

J. Prins, SEO Economisch Onderzoek, Arbeid & Onderwijs, Amsterdam, The Netherlands.

W. van der Hoek, National Institute for Public Health and the Environment, Centre for Infectious Disease Control, Bilthoven, The Netherlands.

J. J. Polder; National Institute of Public Health and the Environment, Unit Population, and Tilburg University, Tilburg, The Netherlands.

***Dr Gabriella Morroy** is a medical consultant in communicable disease control at a large municipal health authority (’s-Hertogenbosch) in The Netherlands. As part of a PhD project, she researches the costs of the Dutch Q fever outbreak. Studies include the long-term health status, productivity loss, health-care consumption and serological follow-up of Q fever patients.*

***Dr. Marcel van Asseldonk** is a senior researcher in risk management at the Agricultural Economic Research Institute, part of Wageningen University. He supervises and conducts research in the field of risk analysis and risk financing in agriculture. His research area focuses on economic assessment of animal diseases, public-private livestock funds and livestock insurance schemes.*

