THE SOCIO-ECONOMIC EVALUATION OF VACCINES IN LIVESTOCK SYSTEMS

Camille Bellet and Jonathan Rushton
Institute of Infection and Global Health, University of Liverpool

69th Annual Meeting of the European Federation of Animal Science
Dubrovnik, Croatia, 27th to 31st August 2018
Acknowledgments

• The SAPHIR Project (Strengthening Animal Production & Health through the Immune Response) of the Horizon 2020 Programme of the European Union (Project ID 633184)

• Dr. Lian Thomas
The value of livestock vaccines?

Source: BBSRC media

Source: Daily express

A MANUFACTURED PLAGUE
THE HISTORY OF FOOT-AND-MOUTH DISEASE IN BRITAIN
ABIGAIL WOODS

coccidiosis
Philip Clarke

Brucellosis
A Zoonotic Disease
H. Rahman
Rajeswari Shome
M. Nagalingam
The value of livestock?

‘Bird flu capable of human-to-human infection’

By China daily, 19 Septembre 2009
Human versus veterinary vaccines

Web of Science, string search

('human vaccin*' AND (cost-effectiveness OR profitability OR cost-benefit)) : 1,104

('animal vaccin*' AND (cost-effectiveness OR profitability OR cost-benefit)): 160
An economic approach

- Understand the context

  Adding value through searching for optimality

  - Understand why it is weak

  - Reallocate resources

An animal health approach

- A disease becomes important

  Adding value through advocacy

  - An economic justification is made

  - Disease programme begins

Rushton, 2017
“......... If we have time we do Gap Analysis based on DISCONTOOLS”

Industry lobby groups

Scientist personal preference

Notifiable disease

Possibly a coordinated campaign

Endemic disease

Ad hoc vaccine use
Vaccine link to bleeding calf syndrome confirmed

Monday 13 June 2011 9:24

Gemma Mackenzie

Results from a Defra-funded study have found a calf was more than 10 times more likely to develop Bleeding Calf Syndrome if its mother had been given the PregSure BVD vaccine prior to its birth.

The study carried out by the Animal Health and Veterinary Laboratories Agency, Scottish Agricultural College, and Moredun Research Institute, found a “significant association” between the PregSure BVD vaccine and Bovine Neonatal Pancytopenia (BNP), commonly known as Bleeding Calf Syndrome.
Initiation of Global Burden of Animal Diseases Programme

Jonathan Rushston, Meghna Bruce, Camille Bellet, Paul Torgerson, Alexandra Shaw, Tom Marsh, David Pigott, Matthew Stone, Julio Pinto, Shannon Mesenhowsk, Paul Wood

DOI: https://doi.org/10.1016/S0140-6736(18)31472-7
Thank you!

Contact: camille.bellet@Liverpool.ac.uk


Rushton, J. (2017). Improving the use of economics in animal health - Challenges in research, policy and education.. Preventive veterinary medicine, 137(Pt B), 130-139.