

# Where should we go? Guiding development of research in response to liver fluke challenges



Barratt, A.S., Vosough Ahmadi, B, Stott, A.W., Correia-Gomes, C., Milne, C.E., Eze, J.I., Henry, M.K., and Tongue, S.C.

Scotland's Rural College, West Mains Road, Edinburgh, EH9 3JG  
Email: Sue.Tongue@sruc.ac.uk / Alyson.Barratt@sruc.ac.uk



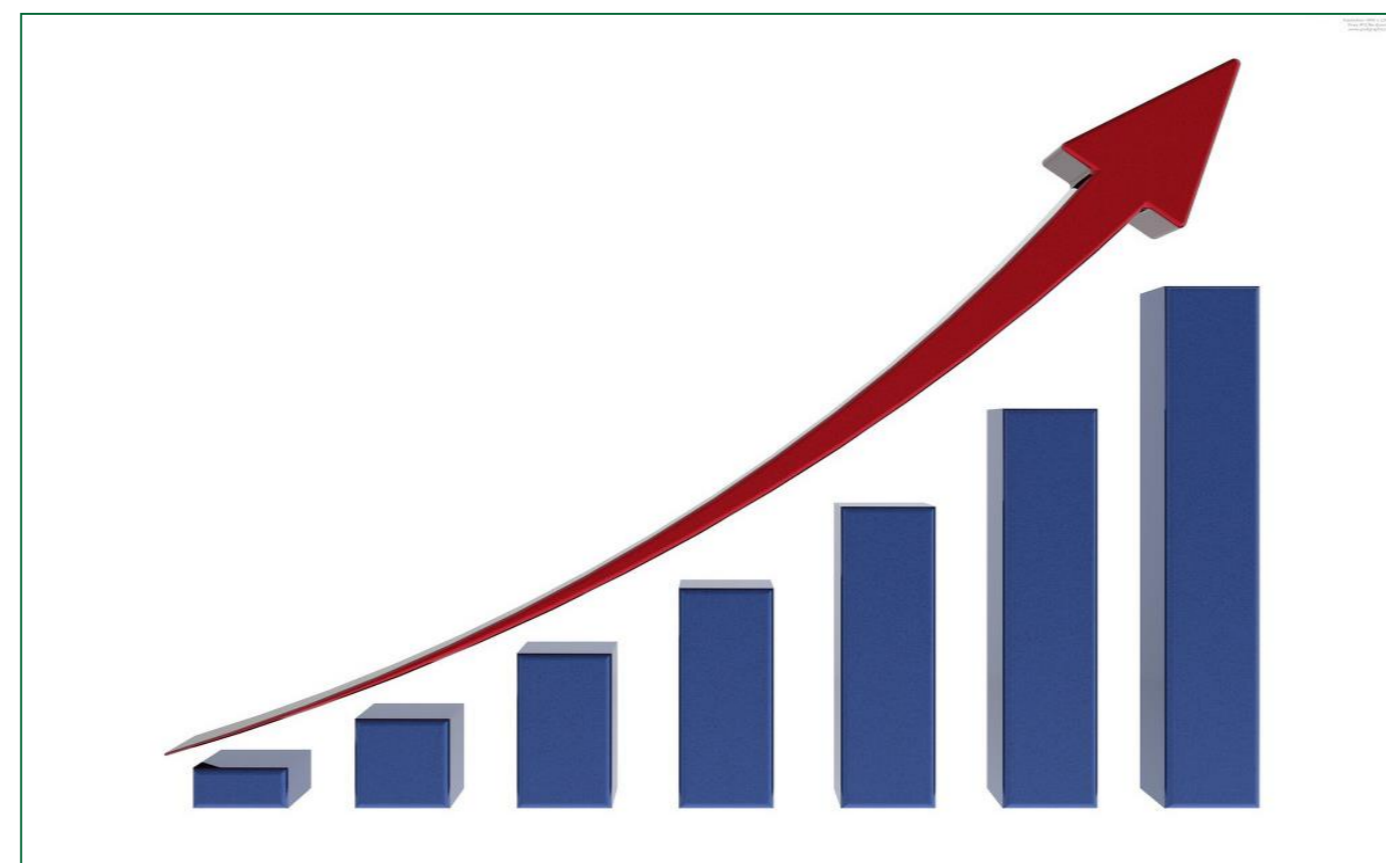
www.sruc.ac.uk

## Aim: Evaluate the economic costs of liver fluke to dairy producers and milk consumers in the UK

Liver fluke is an endemic parasite, causing disease (*fascioliasis*) which affects the health and welfare of ruminants in the UK.



The incidence and the geographic range of liver fluke has increased over the last decade presenting challenges for effective control.



Estimates of total costs of liver fluke at farm level have been published but the problem lacks proper economic analysis to guide scientific solutions.



Decision-support tools are needed to help prioritise alternative strategies to improve the management of liver fluke for producers and policy-makers.



## Suite of models and results



Relative economic welfare gains & loses	7.5% prevalence	17.5% prevalence	27.5% prevalence
<b>Infested herds</b> – £ per cow per year	+13%	Baseline	-15%
<b>Uninfested herds</b> – £ per cow per year	-50%	Baseline	+60%
<b>Milk consumer</b> – £ per household per year	-50%	Baseline	+50%

## Where are we going?

- Suite of models to act as a decision-support tool to prioritise alternative control strategies
  - Propose control methods
  - Estimate cost effectiveness of control strategies
  - Balance cost effectiveness against what is practical on the farm
- What are the challenges?
  - Disease dynamics, climate change, complex farm management systems, data limitations, alternative diagnosis and treatment options, and a need to better inform decision-making.
- How are we addressing these challenges?
  - Working with industry and using expert knowledge



## Acknowledgements

This project was developed by an interdisciplinary research team of epidemiologists and economists working with industry partners to help guide future action. This work is part of “Improving Control of Liver Fluke Infection in Cattle in the UK”, a four-year BBSRC Industry Partnership Award for a programme of research that aims to improve detection and control of liver fluke in cattle in the UK.

BBSRC reference number BB/K015346/1

