Economics of higher health and welfare pig production

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The 65th Annual Meeting of EAAP
25-29 August 2014
Copenhagen

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Supply chain

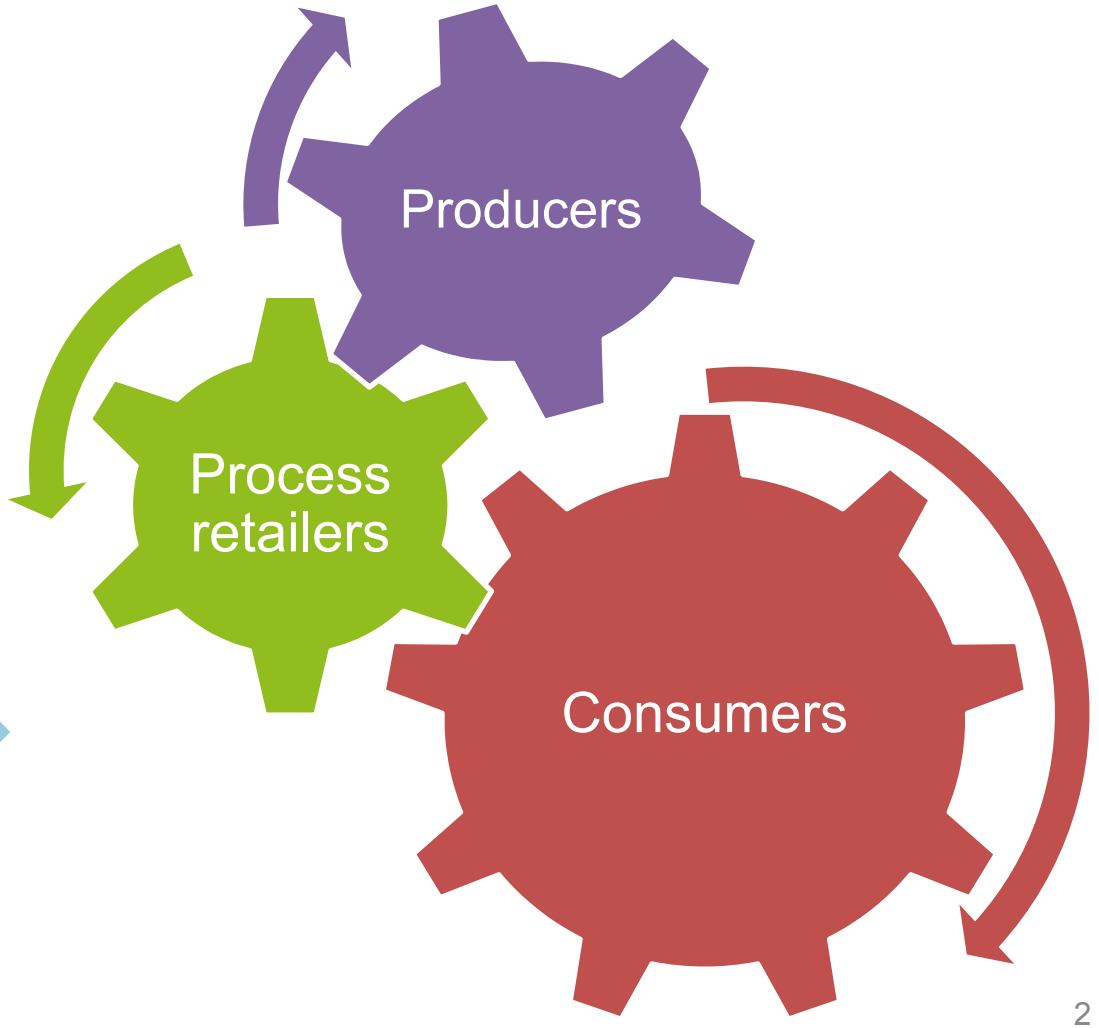
- Diseases
- Management
- Housing
- Behaviour

Affecting:

➢ Health, Performance Growth, Welfare

Market prices based on consumers' demand:

- High animal welfare
- Food-safety
- Environmental concerns
- Organic attributes
- Etc.



Background

- Sustainable disease eradication or control
- Sustainable welfare problems elimination
- Economic alternatives
- Commercially viable & feasible
- Measuring and monitoring
- Analytical methods

Three examples

Health score and cost of diseases

- PRRS
- EP

Farrowing systems

- Crate
- Pen
- Designed pen

Tail docking

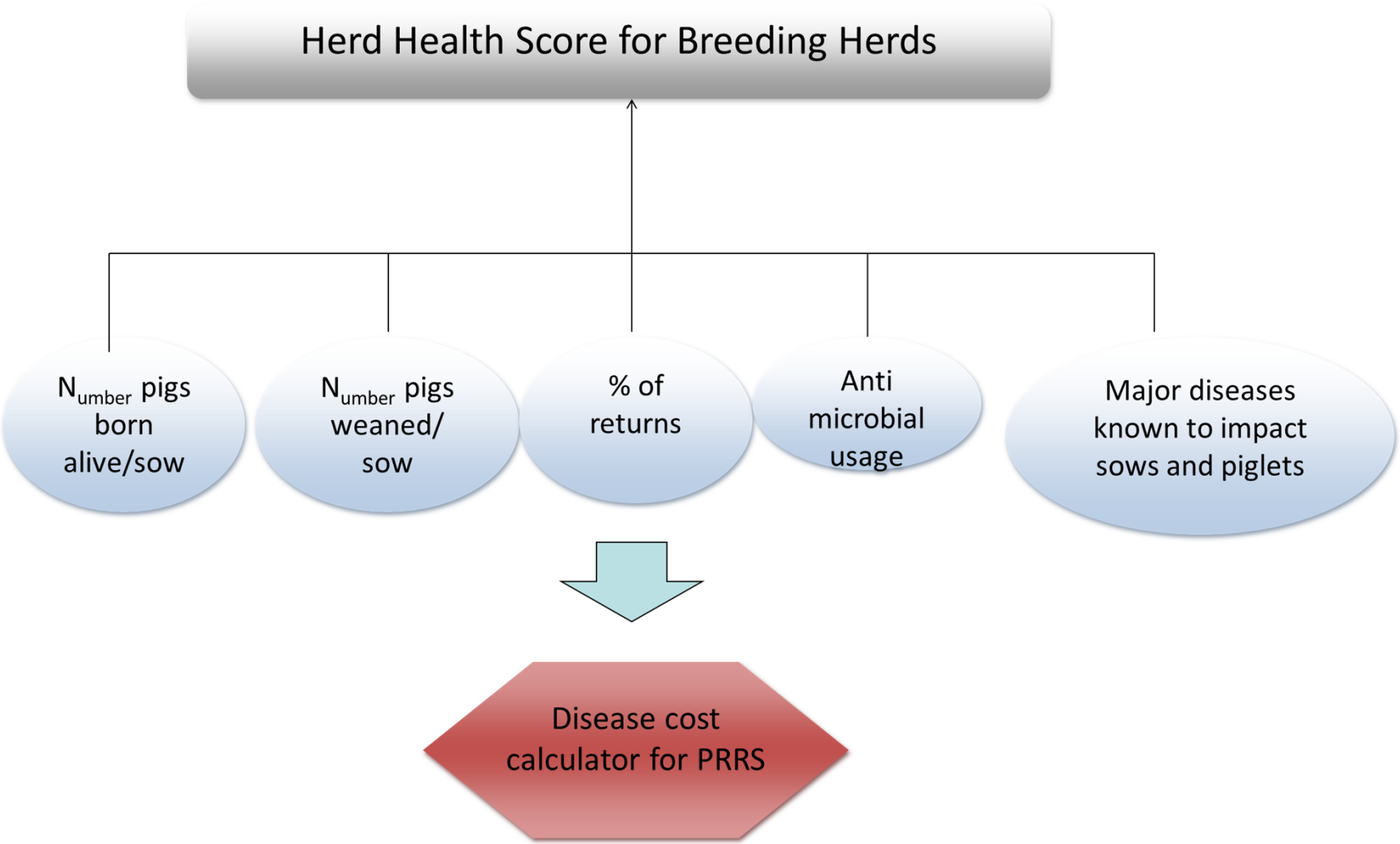
- System 1
- System 2
- System 3

Industry funded (BPEX)

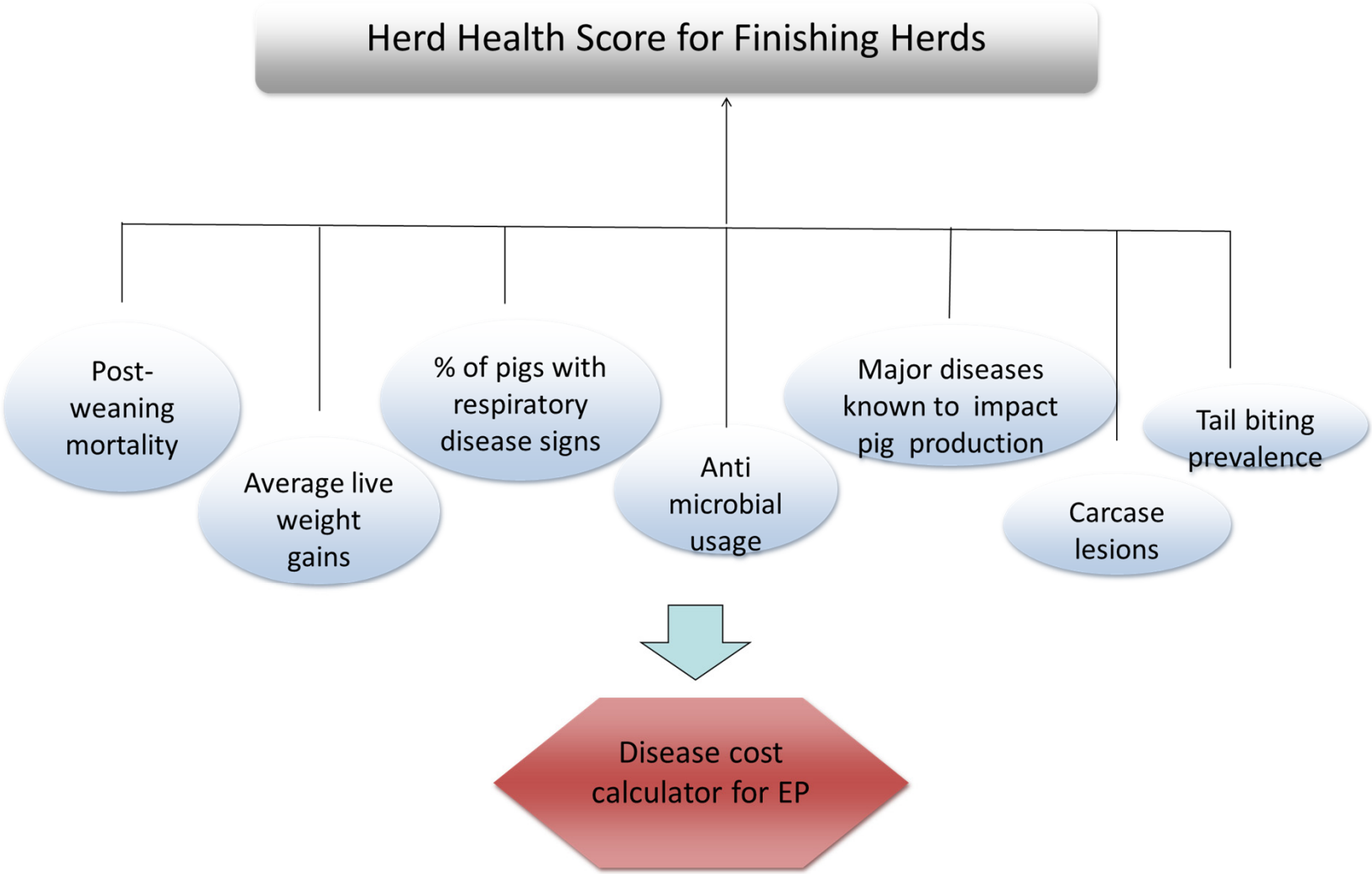
Herd health score and cost of diseases

- PRRS
- EP

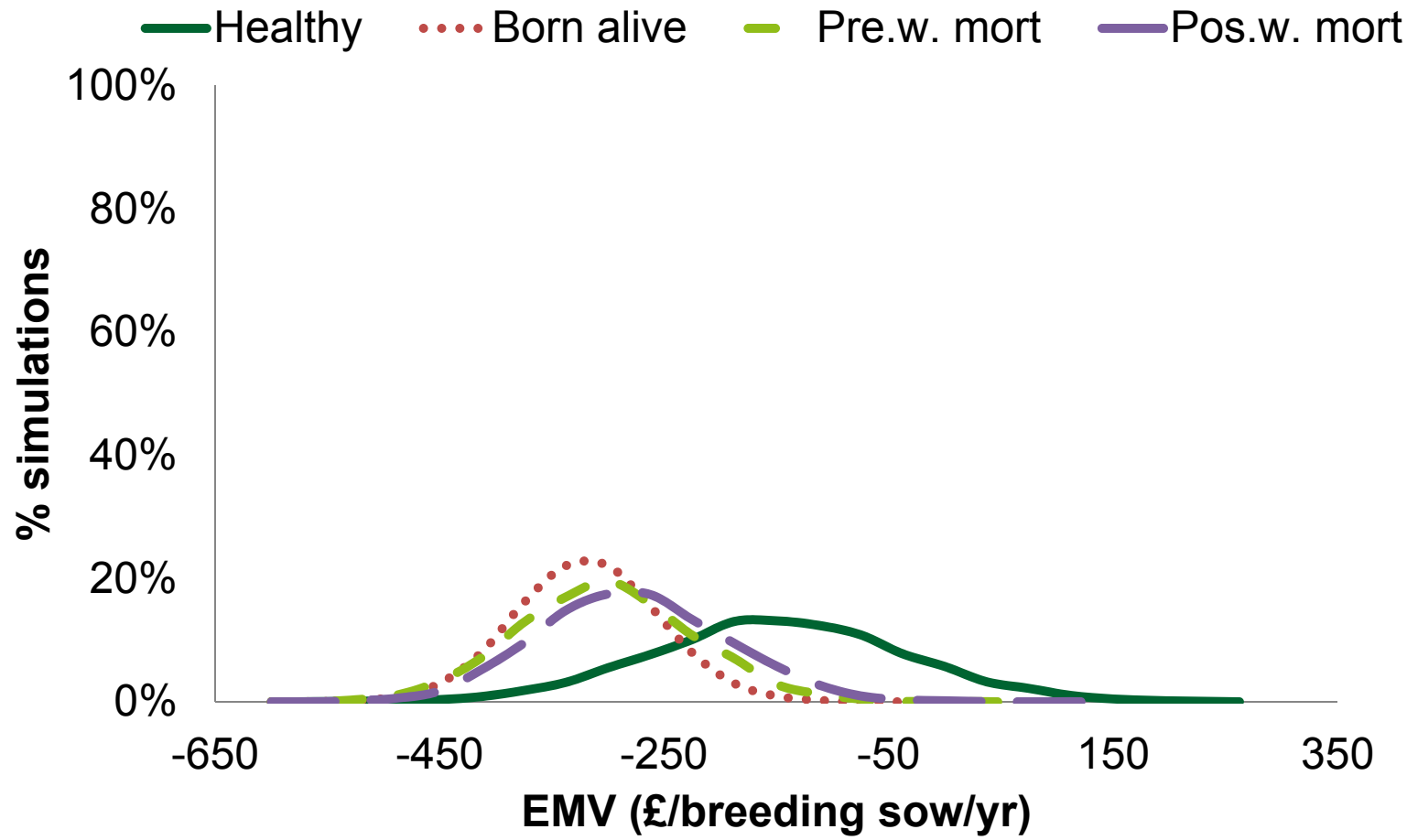
Health score & cost of diseases



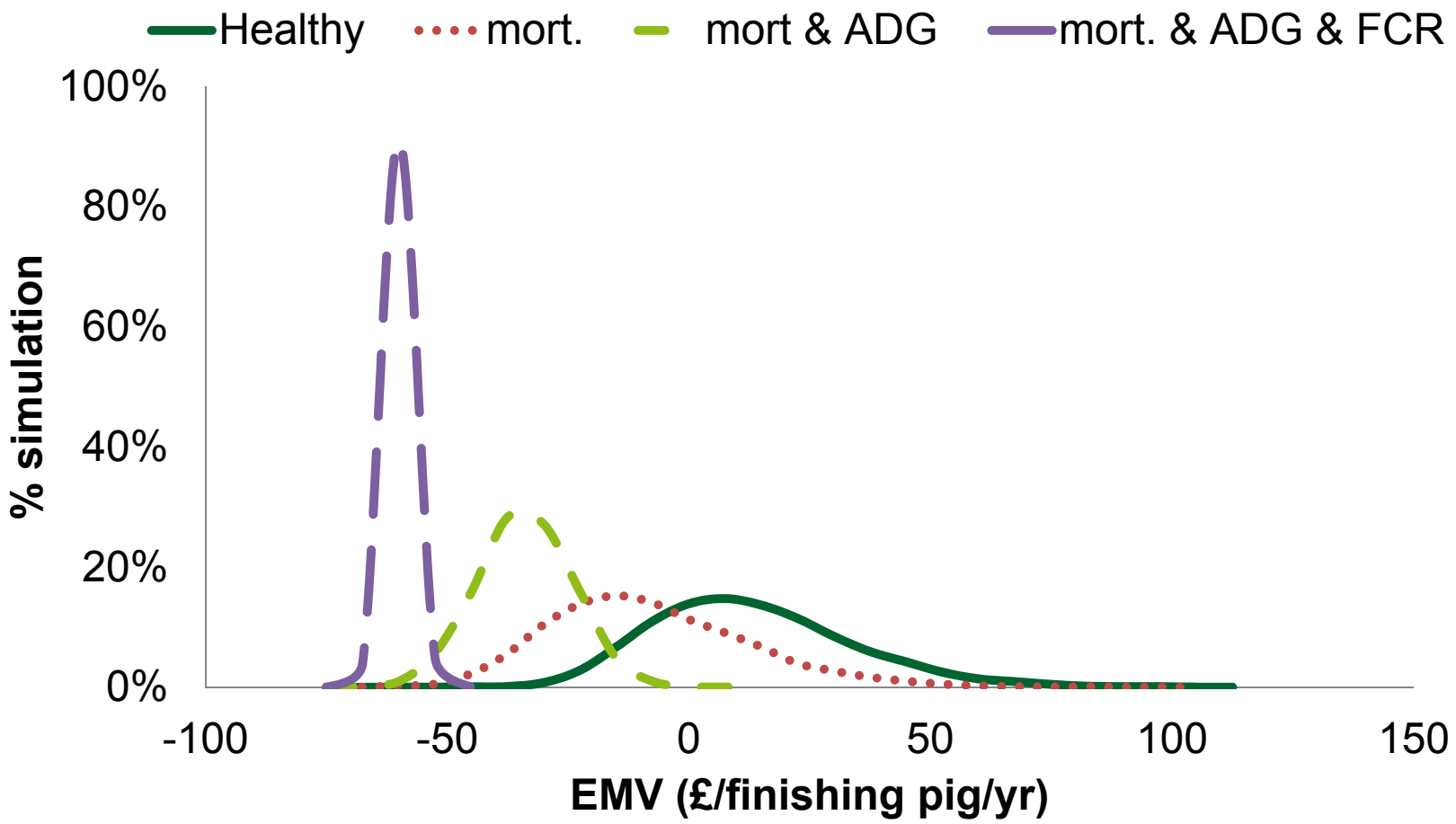
Health score & cost of diseases



Impact of PRRS



Impact of EP


Healthy
mort.
mort & ADG
mort. & ADG & FCR
100%
80%
60%
40%
20%
0%
% simulation
-100
-50
0
50
100
150
EMV (£/finishing pig/yr)

Government & retailer funded

Farrowing systems

- Crate
- Pen
- Designed pen

An alternative

WC-productivity relationships:
- Based on scientific evidence
- Limited by data scarcity

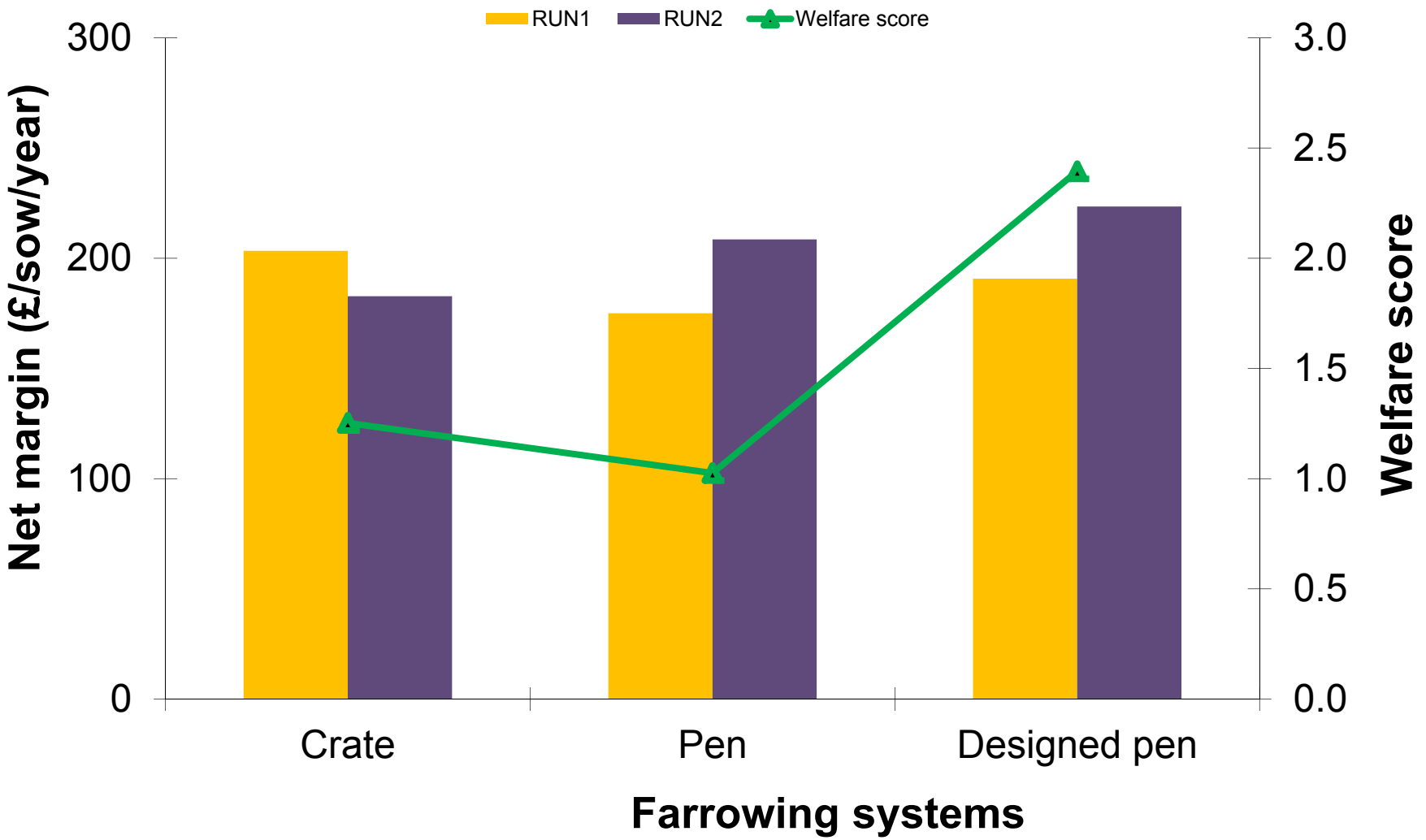
- Space
- Substrate
- Temperature
- Labour

Biological needs of the sow and piglets during nest-building, parturition and lactation phases

Reducing total piglet mortality

Higher financial performance

Margin-welfare score



Government, industry & academia funded

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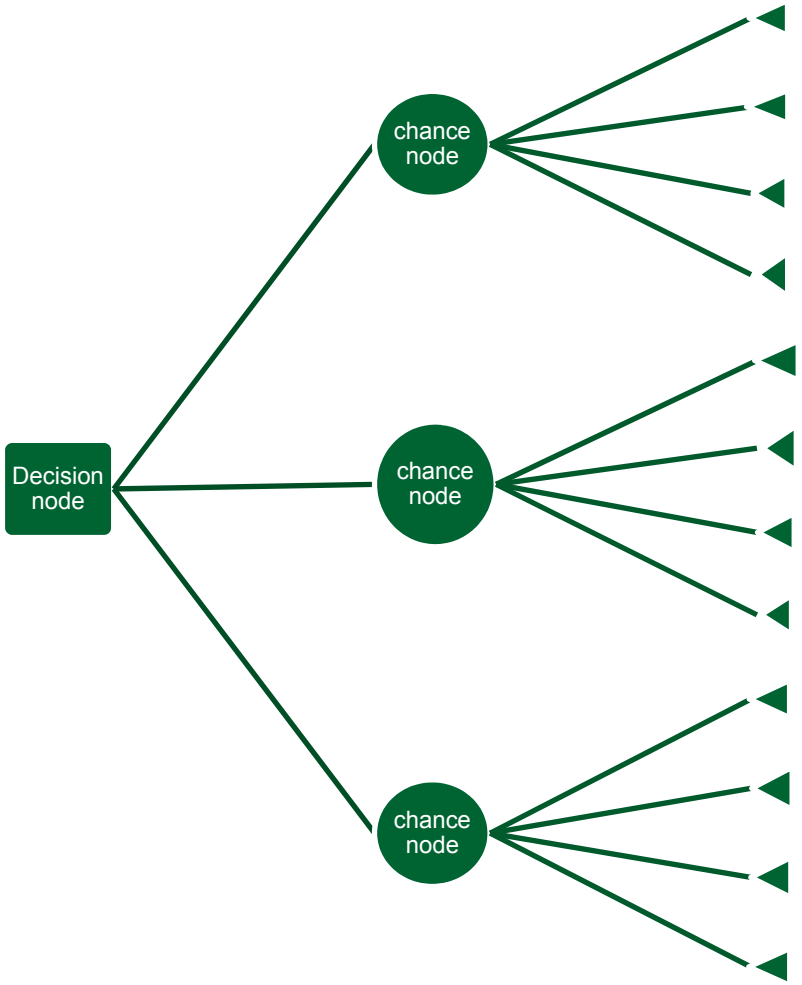
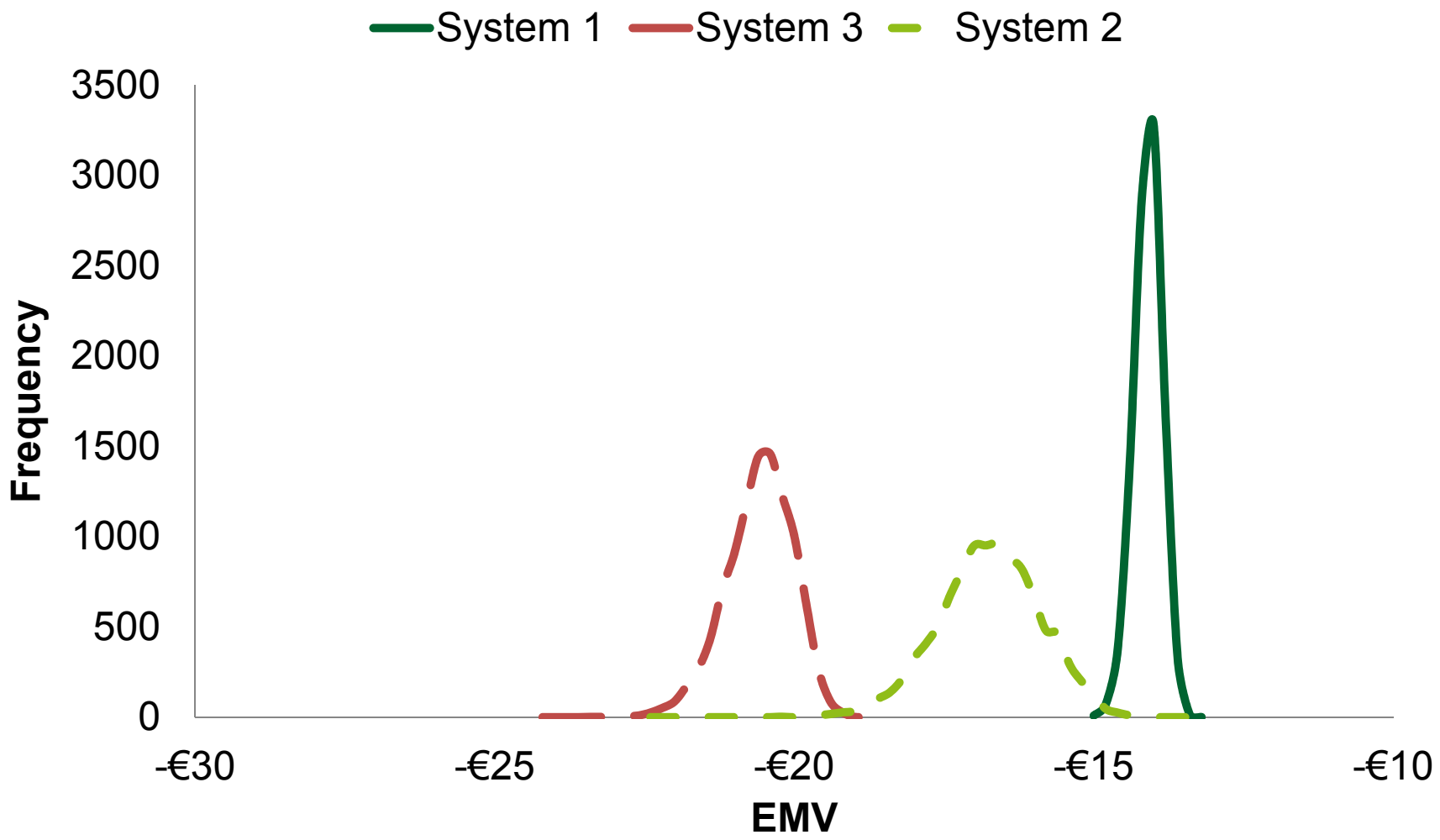
Tail docking management

Housing systems

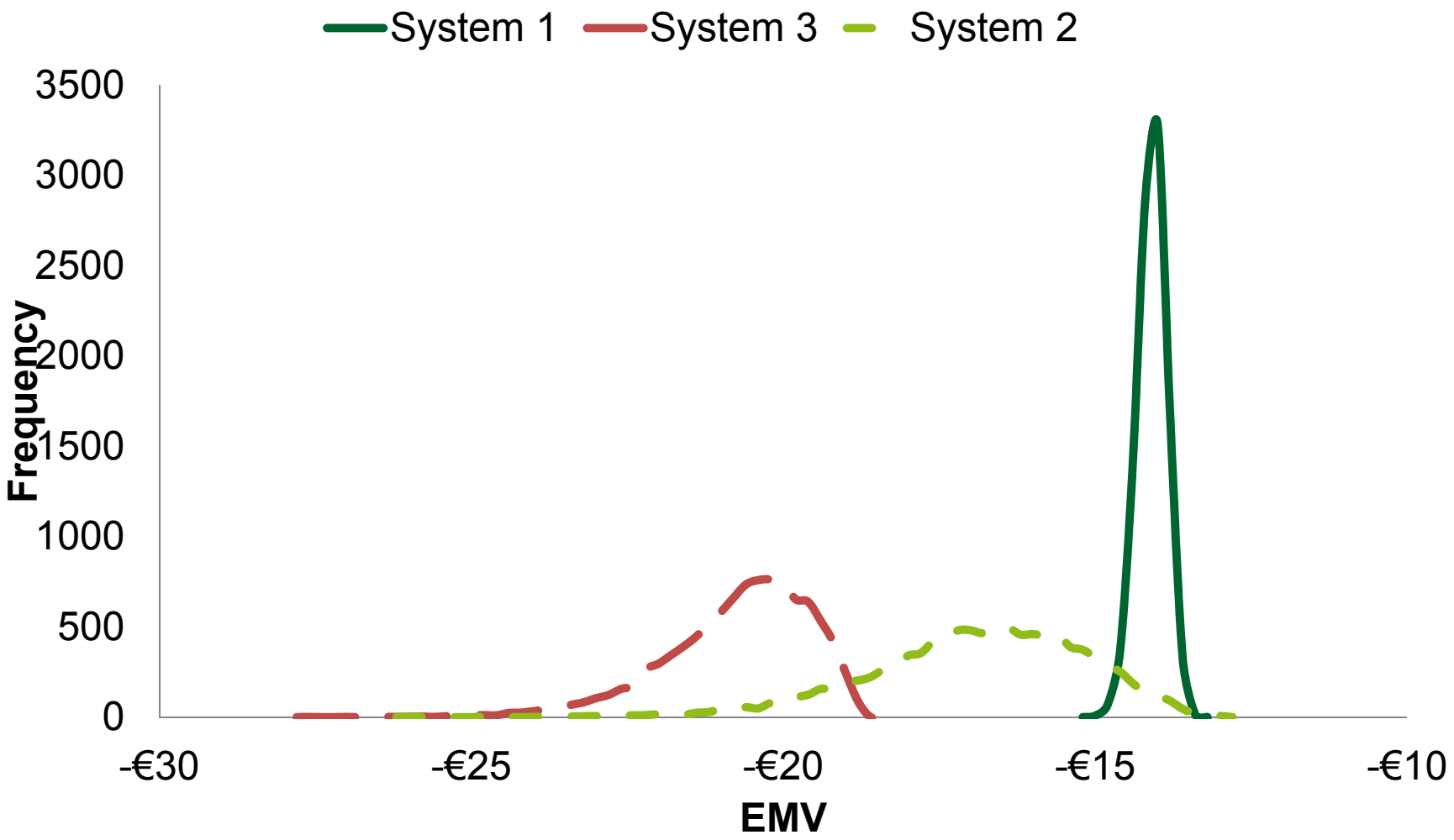
- System1: standard with tail-docking
- System 2: standard with no tail docking, no extra measures
- System 3: enhanced with no tail docking, extra space and straw



Sim.1 (baseline)



Sim.1 (higher uncertainty)



Conclusions

- Diseases and welfare problems need to be tackled at producer level, AND:
- Financial risk of (poor) prevention/control of diseases and management of welfare problems should guide responses, BUT:
- Considerable production system changes and investments (alongside genetic selection) are needed, THEREFORE:
- Collaboration and sharing costs and responsibility between supply chain players is essential.

Acknowledgments

- RESAS: This research is funded by Scottish Government's Rural and Environment Science and Analytical Services Division (RESAS) under Theme 6 'Animal/plant health and disease and animal welfare' (2011-2016).
- DEFRA
- BPEX

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