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## Farmer behaviour: What's changing farm biosecurity?<sup>1</sup>

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**Key message:** Farmers are aware of biosecurity risks and use this knowledge when making management decisions. Market changes, additional knowledge and policy interventions have all played an important underpinning role in initiating change. The investment in animal disease control and a growing awareness of animal diseases are preventing returns to more risky behaviours.

### Main Findings<sup>3</sup>

- This study examined farmer perceptions of the relative riskiness of a range of decision choices with uncertain outcomes, and their likelihood of taking different types of risk. It combined a literature review, a survey of 163 Scottish farmers and two focus groups.
- Risk is a critical factor when making choices between alternative courses of action. The relative riskiness of alternative choices can be important in decisions. This is because farm management decisions often have ramifications for more than one enterprise and address more than one objective (generating profit, managing the environment or caring for animals).
- Farmers surveyed were found to be less willing to take risks with an ethical component as compared to financial, production, health & safety, social and recreational risks. Ethical risks are those where there are accepted principles of right or wrong, for example, knowingly buying/selling livestock that potentially pose a disease risk to other animals.
- Farmers participating in the focus groups:
  - Had a good awareness of biosecurity issues, recognised that they could improve practice and identified a range of factors that hindered adoption of best practice.
  - Had modified their herd replacement policies in the last 10-20 years, specifically by discontinuing the practice of purchasing replacements.
  - Where purchasing of replacements was necessary they preferred to buy privately from known and trusted breeders. This was perceived to provide a degree of disease assurance due to the reputational damage that could result from selling animals with a health problem.
  - Accepted they needed to become more willing to sell livestock privately, to match their desire to buy privately in order to minimise disease spread.



<sup>1</sup> This research was undertaken within the Scottish Government Rural Affairs and the Environment Portfolio Strategic Research Programme 2011-2016, Programme 2: Environmental change Theme 4: Economic adaptation. For more information please see: <http://www.scotland.gov.uk/Topics/Research/About/EBAR/StrategicResearch/future-research-strategy/Themes/ThemesIntro>).

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<sup>3</sup> Note, these findings are focused on beef farmers and may not apply to all livestock sectors.

- Recognised they could improve biosecurity practices by objectively reviewing practices, identifying weak areas and addressing them. They also recognise a range of factors that hinder adoption of best practice that need to be overcome, such as infrastructure and system compatibility constraints (e.g. insufficient labour at peak times).
- Identified three key factors as having initiated or contributed to changing practice:
  - (i) For replacement calves, a loss of trusted suppliers (*market change*) was a key factor driving farm policy adjustments. Animal welfare/transportation policies constrained this type of trade.
  - (ii) *A willingness among farmers to adopt the recommendations of trusted brokers* to investigate the health status of livestock at *low/no cost* meant that farmers gained new knowledge that enabled better disease management. Veterinary surgeons were trusted brokers and subsidising testing through the Scotland Rural Development Programme (SRDP) minimised costs to the farmer.
  - (iii) *Growing knowledge of disease risks* through direct experience of losses and awareness of disease prevalence, in part through policy initiatives such as the BVD eradication scheme.

**Introduction:** The Great Britain outbreak of Foot and Mouth Disease in 2001 marked an awakening for the agricultural and dependent industries, government and wider society. Since that time further exotic disease incursions and threats have highlighted the private and public benefits of farm animal disease control<sup>4</sup>. Animal health management decisions can have consequences for other parts of a farm business and trade-offs are often necessary. For example, allocating labour to address an animal health issue can mean that other critical farm tasks such as harvest operations must be forgone, since labour is one of the most limiting resources on farms today. As a result, to understand farmers' choices, animal health risks must be considered within a holistic context and not in isolation. Such an approach is taken in this study, which examines factors that have and are affecting the management of farm animal health choices including identifying leading drivers of recent changes in practice.

**Methods:** An anonymous survey of 163 Scottish farmers (postal; convenience sampling; regionally dispersed excluding crofting areas) was completed to explore their perceptions of, and willingness to take, animal health and other risks. Two focus groups were then held with a total of 22 farmers, all of whom had suckler cow herds. At these, policies for replacement animals (calves; heifers; cows; bulls) were investigated and discussed in some depth. Though not representative in statistical terms, the participating farmers were diverse (age, experience, education level) and operated varied production systems.

## Policy Implications

This study highlights how policy interventions can be fundamental, either directly or indirectly, in stimulating change. Moreover, a number of policies acting together can synergistically impact on how farmers manage their businesses, though this may take many years to show. For example, changing regulations on livestock movements and transportation as well as the funding of key skills development and disease diagnosis.

Going forward, policy makers need to be mindful of the complexity of farming systems, which have many interdependent enterprises. Consequently, farmers need time to evolve their management systems in response to policy changes, particularly if there are labour implications. In addition, consistent policy messages are needed for farmers to be confident that investing in the development of new practices will reap long term benefits.

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<sup>4</sup> Responsibility and Cost Sharing for Animal Health and Welfare: <https://www.gov.uk/government/publications/responsibility-and-cost-sharing-for-animal-health-and-welfare-final-report>