Investigation of barriers to uptake of Electronic Identification (EID) for sheep management

Claire Morgan-Davies and Nicola Lambe

Key message: Most farmers agree that EID can be used as a sheep management tool, however, only a few have some basic tag reading equipment. Lower costs or financial help to acquire the more advanced equipment, such as an automated weigh crate, would be beneficial. Additionally, clearer evidence that EID can result in economic benefits is needed along with encouraging active demonstration.

Main Findings

- This briefing summarises the findings from a survey of farmers to investigate the potential barriers to uptake of Electronic Identification (EID) for sheep management.
- Most of the respondents were hill farmers with both sheep and cattle on their farms, whilst a quarter were lowland farmers, with mixed farming (arable and livestock).
- The overwhelming majority (97%) of respondents thought that new technology could help farm management, whilst 90% agreed that EID could be used as a management tool.
- Nearly a quarter of farmers had an EID reader on their farm. Its use (in order of number of responses) was for recording animal movement, sorting animals for sale, sorting animals for breeding, and for recording health treatment.
- Barriers to implement the technology on farm were found to be mostly related to financial issues (costs of the equipment). Respondents thought that uptake may be more widespread if the use of the technology was shown to reduce farm labour at handling time, or if there were clear economic benefits.
- Financial help for farmers to equip their farm with technology to exploit EID for management purposes would enable increased uptake.
- Providing specific training on how to use the equipment, or simplifying the use of the equipment should also be considered.
- Active demonstration and face-to-face meetings would most effectively deliver the messages to the industry.

Introduction

Uptake of new technology on farms is often slow, especially in extensive livestock farms. Electronic Identification (EID) was introduced in the early 1980s into livestock farming and since then has increasingly been used as a farm management tool. It is based on Radio Frequency Identification (RFID) and can be used as either an ear tag, a bolus in the stomach, or as a microchip under the skin.

---

1 This research was undertaken within the Scottish Government Rural Affairs and the Environment Portfolio Strategic Research Programme 2011-2016, Programme 2: Food, Land and People. For more information please see http://www.gov.scot/Topics/Research/About/EBAR/StrategicResearch/future-research-strategy/Themes/Theme5
2 Future Farming Systems, SRUC, Hill & Mountain Research Centre, Kirkton, Crianlarich, FK20 8RU. Claire.morgan-davies@sruc.ac.uk
3 Animal & Veterinary Science, SRUC, Hill & Mountain Research Centre, Kirkton, Crianlarich, FK20 8RU. nicola.lambe@sruc.ac.uk.
Compulsory electronic tagging in the sheep industry was introduced in 2010, and despite it often being seen as a burden, there is potential for farmers to embrace the technology as an opportunity.

Participatory research was conducted by research staff at SRUC’s Hill & Mountain Research Centre to understand how livestock farmers (particularly extensive sheep farmers) view and use EID technology on their farms and to investigate potential barriers to uptake of this technology. This research should help inform knowledge exchange in terms of how the technology can be used to improve farm efficiency and management.

**Methods and Results**

Surveys with farmers were carried out at three different sheep shows and events (HighlandSheep, Northsheep and an SRUC sheep event targeted at farmers and vets). Attendees passing the stand or participating in the event were asked to answer a one page questionnaire on the use of EID for sheep farming.

Out of 61 respondents, 28 were hill farmers. Despite nearly all respondents agreeing that new technology can help farm management, and that EID could be used as a management tool, only 20% had an EID reader on their farm, and only one respondent had an automatic shedding crate. The majority of respondents who had an EID reader used the technology for recording animal movement and sorting animals for sale, whilst only a quarter of them used it for recording health treatment and for mating management.

The barriers to uptake of the technology were found to be mostly related to financial issues. If financial and labour-saving benefits were demonstrated, and/or if specific training was available, the technology would be considered for implementation as shown in Figure 1.

**Policy and Industry Implications**

This survey has shown that, although farmers agree in principle on the benefits of new technology and of using EID for farm management, in practice, there are 3 issues that need to be considered before implementation becomes widespread and potentially increases farm efficiency across the industry:

- More evidence is required to demonstrate any economic returns in using EID technology. Additionally lower costs or financial help to acquire the equipment would help considerably. Continuation of the Scotland Rural Development Programme scheme of help towards buying such equipment could be a solution.

- Specific training and/or readily available assistance with the technology on farm should be provided in the form of decision support programmes to help make use of farm data, and advice on how to improve returns through using such data.

- Active demonstration on farm, through monitor or demonstration farms, should be encouraged, in particular to show that using EID for farm management can reduce farm labour.

For more information on the work of SRUC’s Rural Policy Centre, please contact: Dr Jane Atterton, Manager and Policy Researcher, Rural Policy Centre, SRUC, T: 0131 535 4256; E: jane.atterton@sruc.ac.uk; W: www.sruc.ac.uk/ruralpolicycentre