

## Electronic ID (EID) – For Sheep and Cattle

PICK UP YOUR  
DISEASE DETECTIVE  
GAME CARD HERE!



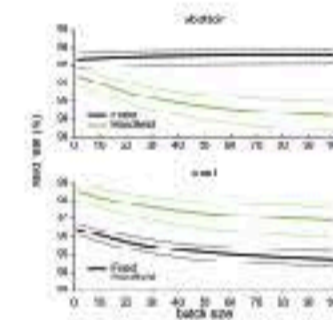
Management Zone



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Sheep passing through a fixed electronic scanner at St Boswells market.



The percentage of sheep whose tags are successfully read by a scanning device depends on the batch size, type of scanner and where the scanning is performed. However, in all situations the average read rates are high.

### Farmers' opinions

Farmers frequently adopt new technologies. Our survey work has shown that livestock farmers fall into 3 main categories:

- those keen to adopt any new technology;
- those who are keen specifically to use EID for animal management either now or in the future;
- those who lack enthusiasm for new technology.

When interviewed, cattle farmers believed that EID would improve traceability, but were largely unaware of how EID could make their herd management more efficient.

Some farmers were not enthusiastic about EID because of the costs involved in retagging (both money and labour), and their concerns that EID tag systems would become obsolete as standards changed.

Farmers are more likely to adopt new technology where they perceive a long-term benefit.

### EID in use

Electronic tags and scanners are already used to record sheep movements through markets and abattoirs. However, some scans will fail. The successful reads and batch records are curated by ScotEID ([www.scoteid.com](http://www.scoteid.com)). We worked with ScotEID to combine a statistical analysis of read rates with a computer model of sheep movement. We were able to calculate the effect of EID read errors on individual animal traceability, and to what extent these might be offset by studying the complete electronic batch record. During a disease incursion, our approach allows resources to be focused on farms most likely to be infected, using only EID data and records from farms already identified as infected.



Visualization of sheep movement network in Scotland on 5th October 2010. Two nodes (holdings) are linked if sheep move between them on that specific day. The complexity of the network means that targeting of resources is essential.



#### What is EPIC?

Funded by Scottish Government, EPIC (Epidemiology Population health and Infectious disease Control) is Scotland's Centre of Expertise on Animal Disease Outbreaks. It brings together Scottish-based expertise under one umbrella to deliver independent, evidence-based advice to help the livestock industries, Scottish Government and other stakeholders prepare for animal disease outbreaks.