



LIVESTOCK TRACEABILITY
EID RESEARCH



**ScotEID - making data work for the
Scottish livestock industry**

Why ScotEID?

ScotEID is a research and development project, initially set up in 2008 by SAOS, working in partnership with the Animal Health and Welfare Division of Scottish Government and an industry working group, to find practical ways to deal with the EU 21/2004 regulation for sheep movement and flock registers that was implemented on 31st December 2009.



The objective of ScotEID is to complete a fully-functional, all species data system, the final part of which is the registration of cattle births, deaths and all movements within Scotland.

Previous slow and inaccurate, paper-based, livestock traceability systems meant that the outbreak of Foot and Mouth Disease in 2001 brought the UK livestock industry to a standstill, with over 730,000 animals culled and a ban placed on all British exports of livestock, meat and animal products. The direct economic cost of compensating farmers for the culls came to a total of £154m, although this was only the tip of the iceberg; a National Audit Office report to Parliament on the handling of the 2001 Foot and Mouth outbreak showed that it cost the public sector over £3 billion and the private sector more than £5 billion¹. Clearly, a more effective system was needed to improve traceability to help manage any serious disease outbreaks in the future.

A pilot stage of the ScotEID sheep project involved the design of a system to record individual sheep movements as web-accessed data, using the information from electronic identifiers on sheep tags. The focus was how to record this information at the 'speed of commerce' at auction marts and abattoirs. The system had to meet the new regulation at minimum cost to the industry, whilst providing a 'real-time', accurate, trace system.



How does the ScotEID system work?

The ScotEID database provides real-time tracing data of farm livestock through their supply chains, until the point when they enter the food chain. This 'holy grail' for farmers, abattoirs, governments, health officials, and consumers has been achieved by ScotEID working with the industry, to provide accurate identification and movement data, with continuous analysis of that data.

Note ¹ <https://www.nao.org.uk/press-release/the-2001-outbreak-of-foot-and-mouth-disease-2/>

The geographical core component of ScotEID is the County Parish Holding (CPH) system of numbers that are used throughout the UK to identify each area of land used by a keeper of livestock. All farm holdings, marts and abattoirs have an individual CPH number. The identity of each animal being moved from one CPH to another, or through a mart or to an abattoir, is recorded into the ScotEID system.

The ScotEID system is straightforward to use. Livestock keepers, marts and abattoirs can check, record and refine the information for all their livestock on the system, using their own secure log-in details. The database is continually being developed to keep up with the changing regulations livestock keepers must adhere to for each individual species. Having livestock movement and register information in one place makes record-keeping more straightforward and accurate. ScotEID has its own Help Team who are happy to provide help and guidance to all users, as well as checking the accuracy of the data each day.

During the pilot stage, 1.25 million lambs were EID-tagged and the data system was 'stress' tested as these lambs moved through marts and abattoirs. Their tags were read with newly-installed automatic readers developed with ScotEID, and the information transferred to the ScotEID database.



Unlike the 'batch' paper records, individual EID data is automatically recorded and therefore the movement records are more accurate and accessible in 'real-time'.

In order to trace animals once they leave the farm, auction marts, abattoirs, ferry terminals and collection centres across Scotland were designated as 'Critical Control Points' (CCPs). The CCPs are fitted with electronic tag readers that have the capability to read multiple tags as the sheep pass through them, instantly updating the system with information on the individual animal's movements and location - and, crucially, creating a record of other animals they may have had contact with, information that can be checked in seconds.



This means that, for example, if a farmer or vet discovers that an animal has been exposed to an infection, it's possible to quickly identify all other animals that have come into contact with it.

ScotEID Development

Although ScotEID originally dealt with sheep and goat movements, it was designed with the purpose of becoming an all species database over time and has now expanded to record cattle and pig movements - the latest phase is recording of Horse IDs and movements.



Although the regulations and requirements are different for each species, the essence of the ScotEID system is the same for each: using CPH data and animal IDs at its core, with accurate, up-to-date movement data of individual animals, which can be accessed in seconds. This means that the system can be adapted to suit a variety of purposes.



The system has been expanded to record and identify the BVD status of cattle/herds, making it integral to the Scottish BVD eradication programme. These records help ensure that PI (Persistently Infected) cattle are identified and removed directly to slaughter, reducing the risk to BVD-free herds.

This adaptability has allowed industry to make use of the system for a variety of purposes, such as the Beef Efficiency Scheme and QMS' SPECC (Scotch Potential Eligibility Cattle Checker) system, that provides farmers and abattoirs with an instant check to determine if cattle they are buying are eligible to be branded 'Scotch Beef' – this quality assurance branding reassures consumers that their beef comes from animals raised to some of the world's strictest welfare standards, and maintains the integrity of the ScotchBeef brand.

As European legislation came into force for the movement of cattle between 'linked' holdings within the same business to be recorded centrally, ScotEID again had functionality added to allow farmers to be compliant with the new legislation. The ScotMoves system went live on 1st January 2017, providing full access to record and check all cattle records on line, rather than being entirely reliant on farm records.



The ScotEID Team

ScotEID's Help team is based in the ScotEID Information Centre in Huntly. They are on hand to help with enquiries relating to using the ScotEID system and database. The staff have farming backgrounds and, between them, have a vast amount of knowledge on various aspects of the database and the rules and regulations. Their knowledge is a tremendous asset for farmers using the system, as they help with the input of data and any enquiries that users may have with the system.

The ScotEID team staff also monitor all the reporting that is done at marts and abattoirs, making sure that the data matches up, and also to provide support, guidance and training to ensure data accuracy. Regular site visits during peak sales time also allow the ScotEID team to understand any issues arising at CCPs and rectify these quickly.



On the technical side, there are expert partners with extensive industry knowledge and skills that are invaluable to the continuing development of the initial concept of the ScotEID system and its expanding functionality:

- Black Isle Technical Services (BITS) provides the required software development skills to build, test and scale the database and software. The BITS team has extensive experience in developing technology solutions for the agri sector in Scotland, and offers a flexible and responsive approach to ScotEID's ongoing development.
- Dr Andrew Moxey provides independent reporting. With extensive knowledge of Scottish agriculture from a government, academic and industry perspective, Dr Moxey has added significant insight and value to ScotEID.
- Biomathematics and Statistics Scotland Research Institution (BioSS) provides research and consultancy in mathematics and statistics. BioSS has been instrumental in providing the statistical research and analysis required during the pilot, to help inform and validate the ScotEID system.

How does ScotEID help Scottish agriculture?

- ScotEID provides a 'real-time', accurate, trace system to provide Government, vets and industry with the tracing tools to manage future disease outbreaks quickly and efficiently.
- The software development and data management by ScotEID is at the very heart of the ambitious, industry-led scheme to eradicate BVD from Scotland.
- Farmers use the ScotEID system to see the BVD status of cattle they are considering buying, as well as checking on their own BVD test results and when testing is due.
- Tracing of all pig movements via ScotEID plays a critical role in maintaining the integrity of the Scottish pig sector should there be an outbreak of disease such as swine fever.
- The database is used by sheep farmers to update their flock register and upload tag numbers.
- The system allows farmers to check whether cattle they are looking to buy are QA Scotch eligible.
- ScotEID provides help and assistance to farmers to comply with various regulations.
- The system provides information for research into disease by EPIC (Epidemiology, Population health and Infectious disease Control).
- ScotEID provides data processing for the Beef Efficiency Scheme.
- ScotEID provides data refinement for Government systems to assist and maintain records as accurate.
- The key reason ScotEID exists is to give farmers and industry the ability to access accurate animal tracing data, quickly.



“Thank you, very easy to use - as with all other ScotEID pages.”

(Email response from one of the first farmers to use the ScotMoves system after it went live on 1st January 2017.)

“The ScotEID system is a huge step forward for everyone involved in the Scottish red meat industry. The ability to have real-time, accurate traceability gives proper reassurance, at every stage in the supply chain, and helps preserve the quality reputation of our beef.

With regard to the SPECC system, we strongly urge all farmers to use this with their own stock, for any store cattle purchased, and before finished cattle are sent for slaughter. It is vital that farmers know the full assured status of all stock in their ownership.” (Alan McNaughton, Site Director, McIntosh Donald.)



“Properly executed throughout the supply chain, EID has the potential to offer the progressive farmer a really valuable source of information and a fantastic management tool to monitor and improve the profitability of their sheep enterprise, embracing everything from growth rates and breeding selection, right through to grassland management and medicine use. It will obviously also track traceability and provenance which is becoming increasingly important in securing premium markets.

Within Farm Stock, we believe that as EID numbers become increasingly available on the kill line and the system develops, EID will transform information flow both up and down the supply chain, with potentially huge management and marketing benefits for all concerned.’ (Ian Watson, Chairman, Farm Stock (Scotland) Ltd)

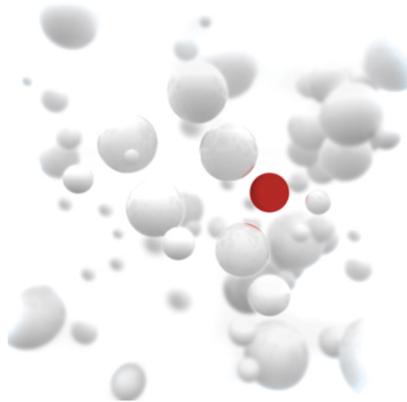


“ScotEID is a one-stop-shop for accurate, up-to-date data, providing full traceability of livestock throughout the supply chain as well as control on future disease outbreaks.

The system, which includes the QMS Scotch Potential Eligibility Cattle Checker (SPECC), is an extremely valuable resource for the Scottish red meat industry.” (Jim McLaren, Chairman, Quality Meat Scotland)

How can ScotEID help you?

If you have questions on any aspect of ScotEID please do not hesitate to call the ScotEID help office in Huntly on **01466 794323** or email **help@scoteid.com**.



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