



Hybu Cig Cymru
Meat Promotion Wales

Introducing **EID recording**

A practical guide to getting started with EID recording
for your flock



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Introduction

Electronic Identification (EID) is a well proven technology that is now considered to be both reliable and more affordable. Several devices to read EID tags are available to suit most needs. Software solutions have also been developed which are suitable for each farming situation. As a result sheep farmers are now benefiting from being able to collect data quickly and efficiently and are able to use the information to help with management decisions and improve flock profitability.

The EID recording project which was delivered by Hybu Cig Cymru – Meat Promotion Wales (HCC) and funded through the Rural Development Plan for Wales 2007-2013 aimed to encourage sheep farmers to use EID technology to record their flock information and gathered feedback on their first experiences of using EID technology. More than 1700 sheep farmers took part in the project and this booklet shares with you some of their feedback and provides information and advice to help you to get started using EID to manage your flock.

EID offers lots of opportunities. The key lies in not making it too complicated. Select a system that will suit your needs so that you can see a benefit and return beyond what is required for simple identification purposes.



How can my business benefit from EID recording?

EID recording gives you the opportunity to improve on-farm management and productivity by letting you collect information much more accurately and easily than you can achieve by manually recording information on paper.

EID recording offers you the benefit of:

- Not having to write down individual IDs, dates and activities;
- Reducing the level of mistakes and paperwork in movement and medicine records;
- Reducing the stress on animals at handling;
- Collecting IDs without the need to read the ear tags manually, increasing speed and safety for those involved;
- High throughput and reduced labour cost since more animals can be managed effectively by less people;
- Having all the information at your fingertips.

The improved information flow enables you to make more objective and timely decisions thus improving performance of your flock and business.

“Recording electronically has released sufficient time in the business so that interrogating barren and lameness figures can now become a reality. The technology has also very much lived up to my expectations. It is one way of future-proofing the business, helping me and my father both increase farm efficiency and meet the emerging traceability demands on the sheep enterprise.”

Gethin Evans, Rhosgoch



“Before using the stick reader and basic software I was only recording batch numbers and this was done by hand. The software provider helped set up a database and the system works well now and has speeded up the process. The equipment has also enabled me to record all problem ewes which will now be culled out of the flock.”

Richard Roderick, Newton Farm

“Every ewe is now on the database, and the initial work setting this up has really proved its worth. I was concerned that using EID would create work for me, but it is the exact opposite; I get better quality decision making information, more quickly, and I'm using the reader to help me undertake batch control, record medicine treatments and capture scanning results. Individual ewe data flashes up on the screen immediately, which means I can make instant, accurate decisions regarding culling and the use of a terminal sire.

The priority for the business at the moment is to weed out the underperforming ewes, link the lambs to the ewes when born, and assess weight gain.”

Dafydd Davies, Pontargamddwr

“By using the reader to record the weights of lambs I have already saved 3 hours of my time. Normally I spend the following evening entering all the data into the farm software but now all I have to do is attach the reader to the computer and it's all done.

Despite our best efforts we also found mistakes were made when we recorded everything by hand. Sometimes the bits of paper ended up so wet we could hardly make out the numbers. The odd recording sheet had also ended up in the washing machine!”

Gethin Jones, Heol Feiniog

How does EID work?

- EID is a tool to record information on an individual quickly and easily
- The electronic identifier has a microchip which contains the animal's individual number
- The electronic identifier can be an ear tag or a bolus.
- Tags are the most popular, cheaper and more widely available way to use EID. EID tags have developed considerably over the past few years and several choices are available.
- To detect the microchip an EID reader sends out a radio signal which is picked up by the microchip. The chip sends back the animal's unique identity number.
- The EID reader can then be used to transfer the animal ID to a computer which uses it to store whatever information is necessary about the identified animal. In simple systems the reader can send the number directly to a printer where a list of animals recorded can be printed.



Using good practice when tagging your animals will help to ensure good retention rates and avoid infections.

Top tips for using EID tags

- Use good quality tags to aid visual and electronic reading;
- Carefully look at the design of EID devices (e.g. style, size, weight, pin length) in relation to the breed and age of your sheep and feeding, housing and fencing arrangements;
- Follow good tagging techniques. Use the correct applicators, according to manufacturer's instructions, to ensure retention and avoid welfare problems;
- The EID tag should be placed in the left ear of the animal. This provides an industry standard and means that readers can be placed in the most appropriate positions and orientations so animals can be easily read no matter where they move to in their life time.

“Our flock is Maedi Visna accredited to help maintain a high-health status. “Every two years a proportion of the flock has to be blood sampled to maintain accredited status. Normally we have to read all the tags manually but this year we were able to scan the ewes with the EID reader. It made such a difference not to have to struggle to read an ear tag and making out the number.”

Llew Thomas, Llygad-yr-Haul



What equipment should I choose?

The number in the microchip within the tag needs to be read using an electronic EID reader. There are different types of readers available, ranging from simple stick readers which collect basic information on individual numbers and group counts, through to panel readers linked to race systems or weigh crates.

Sheep farms in Wales include many different types and sizes of businesses. For small flocks, a relatively low cost system may suffice but for larger numbers you should consider investing in higher performance readers and software to allow the holding of more information and to be able to perform a wider range of management tasks.

The equipment you choose depends on your own farming situation and the type of flock information you require.

Top tips for choosing the right equipment

- Think about what you want to use the EID equipment for and what you will use regularly;
- Ensure that the size of your farming operation justifies the planned investment - consider a basic system that can be added to as you develop and want to get more benefits;
- Buy a reader that meets ISO Quality standards and reads both half duplex (HDX) and full duplex (FDX-B).

Stick readers

- Designed for quick and easy electronic reading;
- Used for reading EID numbers, displaying individual numbers and counting the number of sheep in a group;
- EID numbers are downloaded to your computer or can be sent directly to a printer for a simple list of tags;
- Can create simple sub-groups or management groups;
- Can generally be integrated with other equipment, for example a handheld computer, PC or mobile printer.

Approximate cost: £450 - £850

“I was pleasantly surprised at how fast and specific the stick reader is at recording individual IDs, and found it to be incredibly robust; able to withstand the rough and tumble of sheep handling.”

I now use the reader to record barren ewes and lameness trends, helping improve the overall productivity of the flock. Before the project, collecting and analysing this type of detail was a lower priority for the business due to time pressures.”

Gethin Evans, Rhosgoch

“Accessing individual records whilst handling the sheep was not a priority so a stick reader seemed the right choice for us. Batch management has become so much easier. We didn't go for a high tech option, even though all the family is used to using technology. Keeping it simple has meant that we have a data collection system that is easy to access, and we can keep records in a format that we can understand and interrogate easily.”

John Davies, Cwmbetws



Basic handheld readers

- Offer more functionality than a stick reader;
- Have simple keypads which can be used for basic data recording but have limited ability to add additional data or management information;
- Data is then transferred to a computer software programme for further analysis;
- Do not typically link to other equipment such as weigh heads or race readers, so they should not be viewed as 'expandable' tools.

Approximate cost: £600 - £800

Handheld reader with operating system

- Designed to store individual animal information in the field and enable more data to be collected and processed on your flock;
- Individual animal records can be looked-up in the field so that you can see animal records at a glance;
- Good option for pedigree flocks;
- Can usually be integrated with more advanced electronic weighing, race-reading and shedding systems.

Approximate cost: £1,200 - £1,400

“With the handheld reader I now have individual records at my fingertips when working with the sheep. It is still very early days, but I reckon the use of EID will really prove its worth. It has made recording births and deaths so much easier.”

Gerallt Francis, Penllwyn

“The handheld reader is nice and easy to use, I just needed to get used to downloading the data onto the computer back in the office. As I got more familiar with it, I was able to start interrogating the data on a per ewe basis to help review performance trends.”

Richard Jenkins, Upper Llifor



Static/panel reader

- Generally used in a sheep handling race, a weigh crate or in a mobile handling system;
- Enable animals to be read quickly with minimum human intervention;
- A reader can generally read as many tags as you can present it with, for sheep this can mean up to 400- 500 per hour;
- Basic reading systems capture just the animal ID, whilst more advanced systems link the ID with the collection of other data such as live-weight.

Approximate cost: £800 - £1,250

Weighing equipment

Weighing equipment can be linked to handheld and to static and enable the animal to be identified via EID and its weight automatically recorded against it.

Weighing systems typically consist of a pair of load bars fitted under a weighing crate and a weigh head which reads the weight and sends it to the reader via cabling or Bluetooth.

Alternatively the contents of the weigh head can be downloaded onto a PC for further analysis.



Approximate cost: £3,500 - £4,500

Drafting systems

Automatic drafting systems which utilise EID are also available. As each animal enters the race its EID tag is read. The animal can then be directed out of multiple gates based on any saved information such as breed, age, sex and breeding performance. Depending on the system chosen, the drafting process can be done manually or automatically by the system itself.

Approximate cost: £6,000 - £10,000

“ Looking ahead, we would like to invest in an upgraded software package and an electronic weighing and separating system to aid flock management further. This would further improve our business efficiency, saving us valuable time and providing high quality information on which to base decisions.”

Richard Roderick, Newton Farm



What software do I need to make EID work for me?

Farm management software enables you to take the data you've collected and use it to judge the performance of your animals and to help make management decisions.

Packages vary from a very simple programme which takes the tag numbers and information from the reader and transfers to a PC to a more comprehensive programme which helps analyse and present the data recorded.

Flock management software packages can provide a range of features including individual animal performance data, veterinary records and medicine management. Whole farm systems are also available which include field records and farm accounts.

Farmers taking part in the EID Recording project found this one of the more challenging elements of using the technology. However, by choosing a package that suited their needs it was relatively easy to learn how to use the software and to get the most out of the programme.

To be effective, your chosen software must be easy to use and able to store, analyse and report the data that you collect efficiently and in a convenient way.

Software suppliers should be able to provide detailed information on how to get the best out of any software used.

“I did need support from the manufacturer to ensure that I was getting the best out of the software package. Now that I am more familiar with the software I can download movement records into a standard spreadsheet format.”

Richard Roderick, Newton Farm

“I was concerned about how user friendly the handheld software was and was loathe to spend money on kit that I would likely get frustrated with. However, things have moved on since EID was first introduced and the support from the HCC project encouraged me to give it a go, and I have been delighted with the results.”

Dafydd Davies, Pontargamddwr

Top tips for choosing the right software

- Consider buying equipment and software from one source which can supply and support the full integration of your chosen system;
- Ask your supplier about the training and after sales support that is available to you so you can get the most from your investment;
- Before buying, give yourself sufficient time to examine the equipment and software in order to gauge its suitability, ease of use and the level of IT knowledge required;
- The quality of the on-board software that operates hand-held readers will affect the reliability and the ease of use of the other electronic equipment that you use;
- Consider your level of computer knowledge and select software packages that will suit what you want to do - some of the more complicated IT products will require a good level of understanding.



How do I get the best out of my EID equipment?

Where and how your equipment is used can affect the quality of the reads that you get. Equipment is generally made to withstand normal shock, dirt and exposure to water however as with any electronic device it does have its limitations if not properly cared for.

Planning and preparation can save considerable time:

- Always use reader in accordance with the supplier's instructions;
- Approximate distances for a handheld reader are 12 cm for an ear tag and 20cm for a bolus in the rumen. A stationary reader (static or panel reader) reads all types of identifiers at a typical distance of 50cm;
- Store your reading equipment at ambient temperatures when not in use;
- Avoid using a stick and panel reader close together as they could interfere with one another;
- 'Industrial noise' can affect a reader, this includes electrical motors (particularly variable speed motors), running engines and fluorescent lights;
- A static/panel reader can also pick up readings from extraneous sources (such as surplus devices, car key fobs and micro-chipped dogs);
- Charge batteries sufficiently for the work planned or keep a fully charged spare;
- Ensure the correct data is collected and it is relevant to your management objectives;
- Set aside sufficient time for analysing the information and producing results.

For more information about EID recording contact:
Hybu Cig Cymru on **01970 625050** or visit
www.hccmpw.org.uk/farming/electronic_identification_eid/