

Key point

1. Pending the introduction of bovine EID for traceability purposes, farmers in Scotland voluntarily adopting EID for on-farm management purposes can choose between either Low Frequency (LF) or Ultra-High Frequency (UHF) systems. In either case, a range of tags and readers are available and can be used with different farm management software packages. The background to this situation is explained below. Both LF and UHF equipment is eligible for grant-aid under the recently announced Sustainable Agriculture Capital Grant Scheme (SACGS).

Bovine EID benefits and requirements

2. Bovine EID, the electronic identification of cattle using ear tags containing transponders, offers significant benefits. In particular, by removing the need to 'eyeball' and manually record the IDs printed on tags and passports, EID improves the speed and accuracy with which information relating to cattle can be gathered. This includes the births, deaths and movements required for traceability purposes but also other activities such as weighing animals or administering health products.
3. Enhanced traceability benefits the entire supply-chain by reducing the time, effort and paperwork involved but also through improved capabilities to manage diseases and maintain the trust of consumers and trading partners (an increasingly important consideration as the UK leaves the EU). In addition, easier monitoring of individual animals and use of farm management software packages offers opportunities to improve herd performance through individual animal management (an important consideration financially but also environmentally given the direction of travel of government policy).

Bovine EID technologies

4. EID for traceability purposes requires all parts of the supply-chain to be enrolled. This means that all farms have to be using EID tags and all marts and abattoirs need to be equipped to read EID-tagged cattle and to notify ScotEID. However, as with sheep, individual farmers do not have to be equipped to read EID-tagged animals unless they wish to use EID for on-farm management purposes. Importantly, farmers can choose to use EID for on-farm management purposes irrespective of whether EID is being used for traceability purposes or not. Hence some farmers already have EID-tagged animals despite bovine EID not yet being used for official traceability.
5. EID can be implemented using different radio frequency technologies. As with sheep, the EU has chosen LF for traceability purposes and the UK is following this lead. However, implementation of LF-EID for cattle traceability requires a change in how cattle IDs are formatted if they are to be What-You-See-Is-What-You-Get (WYSIWYG), meaning that what is displayed by EID reading equipment is the same as the number printed on the outside of the tag and on the passport. WYSIWYG is an EU requirement but also the strong preference of most farmers, marts and abattoirs.
6. Unfortunately, although alternative ID formats are available, their adoption causes problems for various UK-wide databases and has led to continuing delays in the introduction of bovine LF-EID for traceability purposes. This does not preclude the use of LF-EID for on-farm management purposes, and indeed some farmers already use it, but does mean that current tags are not WYSIWYG and may not be easily compatible with official bovine LF-EID when it is finally introduced (which may still be several years away). Several non-WYSIWYG LF-EID tags are available for use as official (but non-EID) secondary ear tags or as non-official management tags. Various LF readers are available too.
7. Partly in anticipation of the implementation problems with LF-EID, ScotEID has explored the use of UHF tags as an alternative technology (see also the Research section of ScotEID website). This has some desirable technical capabilities, including faster read rates at a longer distance, and offers a

wider choice of equipment at often lower prices due to being used widely across multiple industries. It is also undergoing on-going research and development, such as the inclusion of GPS location, integration with other equipment and extended read ranges (kilometres rather than metres) for remote monitoring. UHF and LF do not interfere with each other and can co-exist on the same animal (which may be particularly helpful for dairy farms with existing LF-equipped milking parlours).

8. Using UHF-EID for traceability purposes would not require a change in the format of cattle IDs to achieve WYSIWYG and therefore would not cause any issues for UK-wide legacy databases. Currently, one UHF-EID tag is available for use as an official secondary tag, with others available as management tags but currently going through the official approval process. Moreover, as part of the existing EID pilot run by ScotEID, all Scottish marts and abattoirs have been equipped with UHF readers and a number of farms have trialled UHF-EID tags for on-farm purposes. UHF tags are salmon pink in colour, to make it easy to spot UHF-tagged animals amongst a mixed batch.

Conclusion

9. The intention had been for bovine EID in Scotland to be introduced using both LF and UHF at the same time. UK-wide issues mean that Scotland cannot unilaterally implement LF-EID, but could do so for UHF-EID if there was sufficient industry support for such a move. However, individual farmers can use WYSIWYG UHF tags for on-farm management purposes now, and all official UHF tags will be compatible with any subsequent implementation of UHF-EID for traceability purposes. Equally, as noted above, LF tags can also be used now for on-farm purposes, albeit non-WYSIWYG and not as easily compatible with future LF-EID for traceability purposes.
10. Hence, pending the introduction of bovine EID for traceability purposes, farmers in Scotland voluntarily adopting EID for on-farm management purposes can choose between either LF or UHF systems. In either case, a range of tags and readers are available and can be used with different farm management software packages. Both LF and UHF equipment is eligible for grant-aid under the recently announced Sustainable Agriculture Capital Grant Scheme (SACGS).