

Electronic Identification of Sheep

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When sheep were first domesticated, identification (ID) was by appearance and ownership was rarely challenged as the shepherd was well acquainted with each member of the flock. As civilization progressed and people drifted into various occupations, the ownership of sheep became more concentrated among fewer owners. As smaller flocks coalesced into larger and larger flocks, the shepherd became unable to personally identify individuals. Mingling of animals resulted in disputes over ownership which precipitated the need for a visible form of identification. In sheep, this has taken on a variety of forms ranging from ribbons tied into tufts of unshorn fleece to hot iron nose brands, paint brands, ear notches and a wide array of metal and plastic ear tags. Loops of rawhide threaded through a pierced ear, hog rings and even the ubiquitous baling wire holding various objects are codes of ownership and production criteria.

Brands, ear notches and most other forms of identification serve only as group or flock ID. Plastic or metal ear tags can serve as individual ID, but are temporary in nature and often duplicated. With the advent of purebred registration, the alpha/numeric coding system of tattooing became a method which gave permanency to ID and an attempt at individual uniqueness. With the mobility of our society, the need for an individually unique permanent ID has become essential. Proof of ownership, disease control, quality assurance, production analysis, genetic monitoring, proof of identity and transfer of ownership (where only identification becomes vitally important).

Electronic identification (EID) was developed in 1972 by researchers at Los Alamos, New Mexico. This research was funded by USDA/APHIS. The companion animal and more recently the livestock industry has become interested in applying EID to production animals. Dr. Dziuk was one of the earlier workers in applying EID to production animals. In 1988, Dr. Dziuk and researchers from Colorado State University in cooperation with Destron/IDI and the American Sheep Industry Association conducted some of the first studies on EID in feeder lambs.

In 1991, the Scrapie Negotiated Rule Making Committee adopted EID as the official identification of sheep entering the scrapie certification program. The FDA approved the use of electronic transponders in sheep enrolled in the scrapie program with the provision that the Food Safety Inspection Service would remove from the food chain at processing.

Although the application of EID in sheep has been approved only for use in the scrapie program, a number of interesting research trials have been conducted on a variety of applications. These include: 1) the ideal anatomical location for readability, security and ease of removal at processing ; 2) use in identifying and tracing samples submitted to the diagnostic laboratory to eliminate human error of recording numbers; 3) tracing animals from birth through processing to follow carcass characteristics; 4) interfacing EID with the electronic scales and the computer to follow production parameters.

The application of EID in sheep is limited only to the limitation of the producers imagination. If we truly want to identify animals, EID is the most economical form of all methods of identification currently available. The technology is available. The limitation of EID is resistance to change and a lack of commitment to individually unique permanent identification of animals.