

Treatment compliance and traceability by use of the new ETIC[®] electronic recording and vaccinating device, associated to Electronic identification of pigs.

R. Galofré¹, G.Guardia¹, M. Espona¹, R. Segundo¹, J. Sanmartín

Optimal Pork Production Pig Advisory Group. Lerida, Spain. r.segundo@oppgroup.com

Introduction

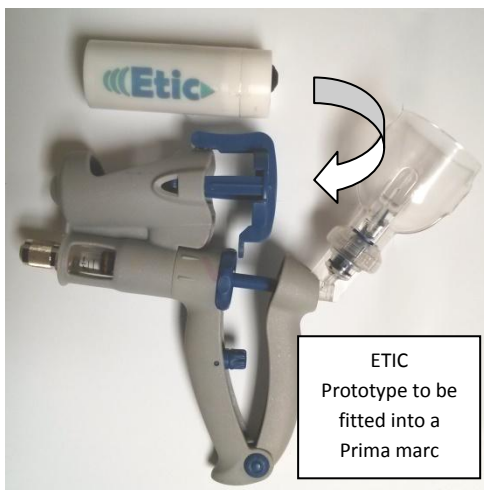
Traceability of medications and other veterinary treatments has become an increasing concern in livestock farming because of its potential implications on residues in meat for human consumption. Withdrawal time, use restrictions for antibiotics, hormones and other drugs, has become a major concern for the pig industry.

Manual recording of injectable treatments is; time consuming, subject to miss interpretation, tampering, paper loss, and frequently hard to verify.

Electronic identification of sows, is already a established production method specially in farms that use Electronic Sow Feeding Stations (ESFS). The possibility of relating treatments to individual pigs using electronic ear tag, plus, automatically recording injectable treatments, to a pre registered product, which can also be connected to software, that provides complementary information, opens new possibilities not only for treatment compliance but also for the traceability of treated animals.

Materials and Methods

An ETIC[®] electronic device was developed by Optimal Pork Production, for the recording of injectable treatments. It was designed to fit a Prima marc vaccinator (Prima Tech, Kenansville, NC, USA), paint spray container.



The design was evolved from prototype 1 to prototype 2, to ensure; a) ease of use, b) records treatment at the end of the injecting process (8 Gigabytes of storage capacity), c) no movable parts, d) sound and visual confirmation of treatment, e) easy ear tag reading, f) water tightness, g) long lasting rechargeable battery (8 hours), h) and easy down load of recorded information (Bluetooth).

Results

Various trials involving injectable treatment of sows in loose group gestation in large pens were carried out in large scale commercial farms in Spain. These trials were established to determine the overall usability of the

ETIC[®] as compared to a standard vaccination, by experienced stockmen and veterinarians.

The procedure being: 1. Record the product to be injected, 2. Read ear tag (includes visual and sound confirmation), 3. Inject product (includes visual and sound confirmation), pass on to another animal and repeat procedure. 4. Download information to PC. The device also records time of treatments. From these trials, many parameters and design aspects were adjusted.

Conclusions and Discussion

All trials concluded with 100% electronic recording of treated animals.

A summarized over all evaluation by users was:

1. Reading ear tags before injecting, somewhat slows down the speed of the injecting process as compared to not recording.
2. After some practice, the completion of injectable treatment (including reading) was considered easy and practical, by most users.
3. The automatic download of the information was considered very practical, for record keeping purposes.

The ETIC[®] device, can be adapted to various types of Primamarc vaccinators, including bottle mounted vaccinators. It can also record number of treated piglets in a litters (if related to a sow ear tag at weaning). It can also be used to record non injectable treatments, and if pens are identified with an ear tag (location tagging) it can record number of treatments within that pen.

The ETIC[®] device includes a basic software that records: Product, Ear tag, Date/Time of treatment.

However evolutions and interconnections of this software are under development.

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References

1. Caja G., et col- (1998). – Coupling active and passive telemetric data collection for monitoring, control and management of animal production at farm and sectorial level. Final Report. Contract AIR3 PL 93 2304, Partner P10. Universitat Autònoma de Barcelona, Spain, 135 pp.
 2. Caja G. & Conill C. (2000). – Progress on EU research projects on electronic identification and traceability of animals and meat. In Symposium on latest developments in livestock identification and traceability, 16 February, Milton Keynes. Meat and Livestock Commission, Milton Keynes, 14.
- Commission of the European Communities (1998).