OVERVIEW OF TOOLS AND TECHNOLOGY - PIGS

OLE KLEJS HANSEN.

Danish Agricultural Advisory Service, National Centre.

Chairman of the ICAR Subcommittee on Animal Identification.

Objectives

This presentation reviews available relevant technologies for the identification of pigs. The presentation discusses the applicability of low technology and high technology solutions, with reference to the associated strength, weaknesses, opportunities and threats.

Discussion

Both low and high technology solutions, which may be used to identify individual animals or groups can be used to good effect, depending on the objectives and scope of the traceability system. The OIE standards for animal identification provide scope and flexibility and countries are encouraged to implement solutions that are appropriate to their legal systems, government objectives and economic conditions.

Ear notching is a simple, low cost method that can be used for on farm identification of pigs. However, this method is limited in terms of the detail that can be provided and for traceability it is important to maintain animals in groups and record relevant information on each group.

Systems based on skin tattoos using codes with four to six positions in the code and numeric or alphanumeric figures provide for more detailed information to be provided. For example this method can provide individual codes for millions of holdings. Tattoo systems are commonly used to provide information on the holding of origin of the animal. While this system alone is not effective for the identification of individual pigs nationwide, a combination of tattoo and ear notching can be used to provide for the individual identification of pigs.

Visual ear tags represent a further level of sophistication and can provide more information, ranging from the identity of the holding of origin all the way to unique individual identification of pigs at national level. It is important that ear tags are durable, tamperproof, can be read with a high degree of accuracy and have a low loss rate. Thus design, performance and cost of ear tags are important considerations.

At the present time, electronic identification methods present the highest level of sophistication and cost. Both electronic ear tags and injected transponders are commercially available. Electronic identification in theory enables full individual traceability because relevant information on all animals can be automatically read and recorded, whether pigs are moved singly or in groups. For electronic ear tags, the key considerations are the same as for visual ear tags. Injected transponders present additional considerations in that skilled personnel and specialised equipment are needed, with attendant costs. A major concern with injected transponders is to ensure the removal of all transponders from all carcasses.

For any type of identification system, recognised technical standards should be used where possible to support harmonisation of national approaches. Internationally recognised performance and conformance tests should be used when choosing identification devices. The International Standards Organization (ISO) has developed relevant technical standards and the International Committee for Animal Recording (ICAR) is the Registration Authority for ISO 11784 and 11785, which deal with the performance of devices.

The pig identification systems that can be used to meet the OIE standards will be presented for discussion at this conference.

Key Words: Pig identification –Traceability –OIE standards –ICAR