
Development, conclusions and recommendations of Session 4: "Identification and traceability of live animals: tools and technology"

Badi Besbes

Animal Production and Health Division, Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla 1, 00100 Rome, Italy

The objective of this session was to present a synopsis of technology developments for animal identification and information (data) management. The compliance with the international standards is a key requirement for choosing any of the technologies proposed. The discussion session tried to address the question what types of tools and technologies are used in Latin America, and more generally how to match the technology with the objectives and the production systems, especially the small-scale production systems.

Introduction

Different equipment for animal identification are available on the market. For the users, it is difficult to understand what equipment best suits their application. Therefore, standards have been developed for identification of animals and testing of identification devices. Not only the technology itself is standardized, but also a system is developed for giving unique identification number to every individual animal worldwide. The International Committee on Animal Recording (ICAR) Guidelines describes the general requirements for identification system.

Outcomes of the session

The International Organization for Standardization (ISO) develops these international standards, but does not conduct any conformance or performance testing. Where required for ensuring the effective use of specific standards, ISO designates a competent body to serve as a registration authority. For example, ICAR is the international registration authority for animal radiofrequency identification (RFID). ISO and ICAR have developed in close cooperation, protocols for testing and approval of identification devices, the aim of which is to ensure compatibility between equipment and information and to protect ICAR members, national authorities and farmers, as end-users, by identifying good quality devices. ICAR has approved so far 346 products from 114 manufacturers, and information regarding these products is in ICAR's homepage (www.icar.org).

Presentations

At this stage, low frequency RFID technology is generally considered as the most efficient technology for identifying animals. The RFID transponder itself does not give any information about the animal, but it is just a link between the animal and the animal information inside a database.

The Database is a tool for storing large volumes of data in a way that facilitates rapid access, high levels of data integrity, minimal duplication of data storage and, more importantly, of data collection, and consequently low costs. The database can

be an on-farm or a central national database. The preferred option is a central database because tracking and tracing is much quicker and more effective, and other systems (such as herd book, Health Service) can be easily linked to it.

Two technology developments are revolutionizing the recording of data and the provision of the information. The first is the handheld computer or PDA for collecting data, which play a major role in reducing the cost of data collection, improving the accuracy of the resulting data and enabling farmers to be more profitable. However, its success depends on the ready availability of accurate identification and location data for each animal.

The second technology is the internet. The use of Internet connection results in a large number of access points to the database, including directly to any farmer with internet access, much easier change management as the software has only to be updated in one place, lower cost of information distribution as much of this is now electronic and direct to the person seeking it, and lower cost of data collection as in many cases the person originally collecting the data is the person adding it to the system.

Discussions

The main points for discussion were:

- What type of technologies used for identification of livestock in LAC?
 - How to match the technology with the objectives (applications) and the production systems, including the small-scale production and transhumant systems?
 - How to ensure integration, harmonization and/or interoperability between the different applications (databases)?
-
- There was a consensus to promote the use of identification devices, visual and/or electronic, that are adapted to the diversity of the production systems.
 - Traditional AIR/T systems currently in use LAC countries faces few challenges. There are specific problems related to the identification of some breeds/species (i.e. hot branding of dark animals; animals with bad temperament); keeping farm register in small herds; communal farms/lands and transhumant herds, for which solutions must be found to define the owner (keeper) and the location of the animals.
 - The authority should make efforts to control animals movement and slaughtering, and to establish a proper system to capture and disseminate related information.

General remarks

The following recommendations were proposed:

- Double identification of the animal using two devices (e.g. one visual tag and one electronic transponder) with the same code, following a standardized coding system.
- The identification and traceability system should include the coding, the registration, the analysis of the information and its use for the different purposes for which it was created.
- Encourage the widest use of the multiple purpose animal identification.

- The tool or technology to be implemented should be based on the equivalence principle stated in the SPS Agreement, and on consensus recommendations.
- Countries must collaborate to ensure the reliability and the operability of the identification and traceability systems.
- International organizations or agencies should promote the dissemination of standards and the update of reference websites.
- Encourage and develop forums to share ISO and ICAR experiences and to help resolve disputes.