Legislative requirements for the identification and traceability of farm animals within the European Union

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Introduction

Identification of animals combined with registration of the holding on which these animals are kept has always been a fundamental part of the European Community (EC) system for managing various commercial and veterinary aspects of animal husbandry. Council Directives on trade and imports of animals and on disease control measures refer to identification of animals, and identify each by a tag on each ear. The principles of active identification of bovine animals (by ear tags) and of ovine, caprine and porcine animals (by ear tags or tattoos) are harmonised within the EC. International passports are issued and recognised only for registered Equidae. The life-number was introduced as an instrument to allow uninterrupted identification of Equidae using passports. The principles of issuing and recording such numbers have been outlined by the affected industries, but require official approval. Active identification of Equidae using electronic devices is not regulated by EC legislation, but research in livestock is underway.

Nonetheless, the need for further improvements was identified in a report by the Commission of the EC in 1998 and has been demonstrated during the outbreaks of foot and mouth disease in 2001. One element of these improvements may be the application of advanced techniques for animal identification, of particular importance to the identification of small ruminants, given the well-known limitations of the conventional means of identification in such species. In 1997, the EC initiated and has since sponsored a research programme, the Identification électronique des animaux (IDEA) project, on electronic identification of cattle, sheep and goats by either ear tags, bolus or transponder. A definitive conclusion on identification by means of electronic implants in food-producing animals can only be drawn after the completion of the final report of this project which, in accordance with Regulation (EC) No 1760/2000, is envisaged for the end of 2001. However, whilst accepting the potential advantages of active identification by electronic devices, a number of operational considerations remain to be assessed, regardless of the species concerned. These include, cost, site of attachment, retention rates, recovery rates at slaughter and ease of application for the individual...

Summary

European Community (EC) legislation requires identification and registration of bovine, ovine, caprine and porcine animals. For intra-Community trade, bovine animals must be accompanied by a passport and the required health certificate, and identified by a tag on each ear. The principles of active identification of bovine animals (by ear tags) and of ovine, caprine and porcine animals (by ear tags or tattoos) are harmonised within the EC. International passports are issued and recognised only for registered Equidae. The life-number was introduced as an instrument to allow uninterrupted identification of Equidae using passports. The principles of issuing and recording such numbers have been outlined by the affected industries, but require official approval. Active identification of Equidae using electronic devices is not regulated by EC legislation, but research in livestock is underway.

Keywords

owner or keeper of the animals, and also certain aspects of such active marking with regard to the protection of consumer health.

The White Paper on Food Safety of the Commission of the EC stipulates an integrated veterinary supervision of the whole food chain, from 'stable to table'. Within this system, uninterrupted traceability of animals and products derived from such animals is an essential prerequisite.

European Community legislation on identification of livestock, except Equidae

Council Directive 64/432/EEC on animal health problems affecting intra-Community trade in bovine animals and swine (9) requires the identification of animals for certification purposes. Community rules for the control of classical swine fever and foot and mouth disease were laid down by Council Directive 80/217/EEC (11) and Council Directive 85/511/EEC, respectively (12). These rules include provisions for monitoring movements of animals, which are essential to prevent any spread of the disease if an outbreak occurs. However, the detailed arrangements for identifying the animals or for tracing the holding of origin are determined by the competent authority of the Member State.

With a view to the completion of the internal market, the Council, by adopting Directive 90/425/EEC (13), prescribed rules concerning veterinary and zootechnical checks applicable in intra-Community trade in certain live animals. According to these rules, animals must be identified in accordance with EC rules and be registered in such a way that the original or transit holding, centre or organisation can be traced.

Community rules on identification and registration of bovine, porcine, ovine and caprine animals were laid down in Council Directive 92/102/EEC (17). The two basic objectives of these rules are as follows:

a) the localisation and tracing of animals for veterinary purposes, which is of crucial importance for the control of infectious diseases

b) the management and supervision of livestock premiums as part of the reform of the agricultural policy.

Porcine, ovine and caprine animals

Pigs, sheep and goats must be marked as soon as possible, and in any case before leaving the holding of origin, with an ear tag or tattoo. The identification mark must allow the determination of the holding of origin and enable reference to any accompanying document which must mention such an ear tag or tattoo. Furthermore, the mark must be cross-referenced in the list of all holdings with animals of the relevant species, which must be maintained by each Member State.

The identification mark can be removed or replaced only with the permission of the competent authority, and the keeper must record any new mark in the register, so as to establish a link with the previous mark applied to the animal.

The national systems of the Member States for movements of pigs, sheep and goats in their territories must enable the identification of the last holding of the animals and the holding on which the animals were born.

For movements to other Member States, pigs must be accompanied by a health certificate in accordance with Council Directive 64/432/EEC, while sheep and goats must be accompanied by a health certificate in accordance with Council Directive 91/68/EEC on animal health conditions governing intra-Community trade in ovine and caprine animals (16). The health certificate includes information on the official identification of the animals concerned.

Pig keepers must maintain a register stating the number of animals present on the holding, while sheep and goat keepers must maintain a register including at least the total number of animals present on the holding on a fixed date each year and an up-to-date statement of the number of live female sheep and goats which are over the age of twelve months or have given birth. The register must include an up-to-date record of movements (number of animals entering and leaving the holding), stating, as appropriate, the origin or destination, the date of such movements and the identification mark.

For animals to be moved to or from a market or collection centre, the keeper must provide a document supplying details of the animals to the operator of the market or collection centre, who is considered as the keeper of the animals on a temporary basis.

Animals imported from a third country must be identified by a mark within thirty days, and in any event before leaving the destination holding. This requirement does not apply if the destination holding is a slaughterhouse situated in the territory of the Member State in which the veterinary border checks are performed and the animals are slaughtered within the thirty-day period. A link must be established between the identification allocated by the third country and the identification allocated by the receiving Member State; this link must be recorded in the holding register.

Council Directive 64/432/EEC refers to the creation of computer databases for bovine and porcine animals to store and process information on animals and animal movements. To ensure the appropriate implementation of functional databases for recording movements of porcine animals, Community rules
for computerised national databases for porcine animals were prescribed in Directive 2000/15/EC (19) amending Council Directive 64/432/EEC.

Accordingly, the deadlines for the full implementation of computerised national databases for pigs are 31 December 2000 for the registers of holdings, 31 December 2001 for the registration of movements of pigs from the holding of birth and 31 December 2002 for movements from all other holdings. Information on each movement of a group of pigs must include the number of pigs moved, the identification number of the holding or herd of departure, the date of departure, the identification number of the holding or herd of arrival and the date of arrival.

**Bovine animals**

With the adoption of Council Directive 92/102/EEC, bovine animals should be identified with an ear tag bearing a code enabling individual identification of each animal as well as the holding of birth. However, experience and notably the BSE crisis has shown that the implementation of Directive 92/102/EEC was not entirely satisfactory and needed further improvement. Therefore, the adoption of a specific regulation for bovine animals was necessary to reinforce the provisions of the Directive.

Hence, Council Regulation (EC) No. 820/97 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products (18) was adopted. According to this Regulation, bovine animals must be identified by an ear tag applied to each ear and accompanied by a passport throughout any movement. These requirements are upheld in the current Regulation (EC) No. 1760/2000 of the European Parliament and of the Council of 17 July 2000, establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation (EC) No. 820/97 (20).

The system for the identification and registration of bovine animals is comprised of several elements, as described below.

**Ear tags**

Ear tags are employed to identify animals individually. An ear tag approved by the competent authority must be applied to each ear. Detailed rules for the model of the ear tag are stipulated in Commission Regulation (EC) No. 2629/97 (6).

Ear tags must contain at least the name, the code or the logo of the competent authority or the central competent authority of the Member State which allocated the ear tags, the two-letter country code and a numeric code not exceeding twelve digits. An additional bar code may be authorised by the central competent authorities of the Member States. Furthermore, the replacement ear tags used in the event of ear tag losses may contain a mark with the version number of the replacement ear tag expressed in Roman numerals.

**Computerised national databases**

Computerised national databases for bovine animals should have been fully operational since 31 December 1999. The database must contain information for each bovine animal (identification code, date of birth, sex, breed or colour of coat, identification code of the mother or, in the case of an animal imported from a third country, the identification number given corresponding to the number allocated by the country of origin, identification number of the holding of birth, identification numbers of all holdings on which the animal has been kept, the dates of each change of holding and the date of death or slaughter. In addition, the database must contain information for each holding (identification number and name and address of the holder). The database must be able to supply, at any time, a list of identification numbers for all bovine animals present on a holding, and a list of all changes of holding for each bovine animal, starting from the holding of birth or holding of importation. While the compatibility of the data transfer systems of Member States provides for a simplification of systems for the payment of premiums, the issue of overall compatibility of the national databases with a view to improving the system of identification and registration of bovine animals is still to be resolved.

**Cattle passports**

Cattle passports shall be issued for each bovine animal within fourteen days of the notification of birth, or in the case of animals imported from third countries, within fourteen days of the notification of its re-identification by the Member State concerned. Passports may be issued for animals from another Member State under the same conditions. In such cases, the passport accompanying the animal on arrival is surrendered to the competent authority which returns it to the issuing Member State.

During all movements, a bovine animal must be accompanied by a passport. By way of derogation from this requirement, animals can move within a Member State without being accompanied by a passport, provided that the Member State has a computerised database which the Commission deems fully operational. In the case of the death of an animal, the passport must be returned by the keeper to the competent authority. Similarly, when animals are sent to the slaughterhouse, the operator of the slaughterhouse must return the passport to the competent authority. When animals are exported to third countries, the passport must be surrendered by the last keeper to the competent authority of the country from which the animal was exported.

Detailed rules for the model of the passport have been prescribed in Commission Regulation (EC) No. 2629/97.
The passport must contain information on the animal (identification code, date of birth, sex, breed or colour of coat, identification code of the mother or, in the case of an animal imported from a third country, the identification number given and corresponding to the number allocated by the country of origin) the identification number of the holding of birth, and identification numbers of all holdings on which the animal has been kept and the dates of each change of holding.

In addition, the passport must contain the signature of the keeper(s), with the exception of the transporter, and the name of the issuing authority.

**Individual registers**

Individual registers must be kept on each holding. Detailed rules for the content of the register are established in Commission Regulation (EC) No. 2629/97.

The register must contain up-to-date information on each animal (identification code, date of birth, sex, breed or colour of coat), the date of death of the animal on the holding, or in the case of departure, the identification code of the destination holding and the date of departure, and in the case of arrival, the identification code of the holding of despatch and the date of arrival. In addition, checks by the competent authority must be signed in the register.

Animal movement from one Member State to another or from a veterinary border inspection post to the final destination is notified to the authorities of the destination country via the animal movement system (ANIMO), a computerised message system operated by Member States.

**European Community legislation on identification of Equidae**

**Passport and certification requirements**


Based on this Directive, the Commission, by adopting Decision 93/623/EEC (5), established the identification document (passport) accompanying registered Equidae. The model passport was prepared in close co-operation with the Office International des Epizooties (OIE), which adopted a model for competition horses at the 61st General Session in 1993, and took account of the existing passport models used by the Fédération Equestre Internationale (FEI) for competition horses and by Weatherbys for racehorses.

According to Decision 93/623/EEC, all registered Equidae born after 1 January 1998 must be identified by means of a passport. The identification of Equidae born before this date remains facultative.

The passport format was chosen because this was already the internationally approved method for identification of Equidae. However, the passport must be unambiguously linked to the animal. The classic recording of the signalment (details of marks) and the completion of an outline sketch were considered the best means of identifying Equidae, if performed by trained and skilled personnel.

While Decision 93/623/EEC provides minimum requirements for the means of identification, the passport remains open for the recording of additional means of identification as required by the various breeding or sport organisations. Additional means of identification may be passive, such as chestnut prints, photographs (in particular for paint horses), results of analysis of blood groups and deoxyribonucleic acid (DNA), or active, such as freeze and hot brands, tattoos and electronic identification (by silicon chip).

The requirements for identification and certification of Equidae during movement are prescribed in Council Directive 90/426/EEC of 26 June 1990 on animal health conditions governing the movement and import from third countries of Equidae (15). With the adoption of Decision 2000/68/EC (7), the identification document for breeding and production of Equidae was established using parts of the information provided for in Decision 93/623/EEC. At the same time, the deadline of 1 July 2000 was asserted, by which time all Equidae had to be accompanied by either a passport or an identification document during movement. However, Commission Decision 2000/68/EC is not applicable to imports of Equidae from third countries.

European Community requirements for the identification and certification/attestation of Equidae are summarised in Table I.

Movement and imports of properly identified and registered Equidae are facilitated by the specific health guarantees that take into account the higher health status and better veterinary supervision of traceable animals.

Equidae imported into the EU must originate from countries approved and included in a list of third countries established under Council Decision 79/542/EEC (10) and for which the import conditions are laid down. The evaluation of the registration of Equidae is part of the assessment preceding the approval of imports of Equidae from third countries. To this end, the system of registration by either breeding organisations or organisations handling Equidae for competition or racing purposes is subject to scrutiny during the veterinary inspection missions performed by the Food and Veterinary Office of the European Commission.
Table I
Identification and certification requirements for Equidae in accordance with legislation of the European Community

<table>
<thead>
<tr>
<th>Category of Equidae</th>
<th>Type of movement</th>
<th>Identification</th>
<th>Certification</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Equidae</td>
<td>On foot (national)</td>
<td>Passport a)</td>
<td>Not required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transport (national)</td>
<td>Passport a)</td>
<td>Not required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Imports a)</td>
<td>Passport a)</td>
<td>Decision 92/260/EEC</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Decision 93/195/EEC</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Decision 93/197/EEC</td>
<td>4</td>
</tr>
<tr>
<td>Equidae for breeding and production</td>
<td>On foot (national)</td>
<td>Identification document b)</td>
<td>Not required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Imports a)</td>
<td>Identification document b)</td>
<td>Decision 93/197/EEC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Passport a) and/or Identification document b)</td>
<td>Directive 90/426/EEC Annex C</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Passport a) and/or Identification document b)</td>
<td>Decision 93/196/EEC</td>
<td>3</td>
</tr>
</tbody>
</table>

a) identification document in accordance with Decision 93/623/EEC (passport) (5)
b) identification document established by Decision 2000/68/EC (7)
c) intra-Community trade between European Union Member States, permanent and temporary
d) temporary or permanent introduction or re-introduction of Equidae in compliance with Directive 90/426/EEC (15)

The universal life-number

Traceability of an animal across borders and between various competent authorities is important, for reasons of animal health during national and international movement, for recording medicinal treatment, international exchange of breeding animals or their germinal products and recording performance details.

To maintain continuity in the identification of Equidae throughout the lifetime of the animal, the identification number provided for in Decision 93/623/EEC was declared the life-number of the animal, to which any identification detail must be related (Decision 2000/68/EEC).

The existence of a life-number provides additional guarantees regarding the identity of an animal if this identity is recorded in a central database, maintained by the issuing authority or on behalf and under the supervision of that authority. However, such a database has not yet been created, although individual organisations responsible for issuing passports have established their own databases. These stand-alone databases must be made compatible for networking in the future. One of the requirements for making the national or even regional databases compatible, and thereby allowing electronic data exchange, was the harmonisation of the format of the life-number.

Under the auspices of the World Breeding Federation for Sport Horses (WBFSH), the idea of a life-number has been promoted at the international level, involving major breeding organisations and organisations handling horses for various competition purposes. Following presentation of the final format of the universal equine life-number (UELN) by Gautier and Guibert (21), the WBFSH agreed to this format at a meeting in October 2000. The project still needs the approval of international organisations such as the International Stud-Book Committee, the European and World Arab Horse Organisations, the European Trotting Union and the FEI, to whom the project has been presented for an opinion. Additional information on the UELN is provided online at the following address: http://www.haras-nationaux.fr/ueln/main.htm.

The key element of this format, based on the International Organization for Standardization (ISO), is the integration of the different life-numbers already attributed to horses into a fifteen-digit format consisting of the following:
- a three-digit ISO-3166 country code
- a three-digit code attributed by the national authority to the organisation issuing the passport
- a nine-digit code for the individual registration number of the animal in the database of the organisation that issued the passport.
In those countries of the EU in which passports are issued by breeding organisations or breeders associations, such organisations and associations must be approved or recognised by the competent authorities of the Member States in accordance with Council Directive 90/427/EC. The list of approved organisations and associations maintaining or establishing herd-books must be communicated to the Commission of the EC.

**Active electronic identification**

In the context of Decision 2000/68/EC, active identification by implantation of an electronic identification device, chip or transponder, is receiving increasing attention from the organisations concerned with registering Equidae and from certain Veterinary Services. The different means and techniques for identification of Equidae, and horses in particular, have been reviewed by Meyer (22).

The advantages of transponder identification and the various implantation techniques appear to have been agreed, but different opinions exist as to the standard formats of the code, the readability of chips by devices of different brands and the site of implantation. A comprehensive study on the possibilities and problems of electronic identification, in particular of saddle horses, is presented by Meyer (23). Guthrie reports on chip implantation into the *funiculus nuchae* of thoroughbred horses in South Africa, in line with the recommendations of the United States Department of Agriculture/Food and Drug Administration referred to by Cordes (8). An EC veterinary inspection mission undertaken in Saudi Arabia in 1994 noted implantation of a transponder into the left middle segment of the neck in pure-bred Arab horses in connection with a database and the issuing of passports (A. Guthrie, personal communication).

Given that EC legislation considers Equidae as food-producing animals and that the legislation on fresh meat also applies to meat from these animals, any final decision on electronic identification of Equidae within the EU will have to consider the findings of the IDEA project on the electronic identification of other species of food-producing animals.

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**Obligations légales en matière d’identification et de traçabilité des animaux de ferme au sein de l’Union européenne**

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**Résumé**

L’identification et l’enregistrement des bovins, des ovins, des caprins et des porcins sont obligatoires au sein de la Communauté européenne (CE). La réglementation des échanges intracommunautaires stipule l’obligation pour les bovins d’être accompagnés d’un passeport ainsi que d’un certificat sanitaire et d’être identifiés au moyen d’agrafes apposées à chaque oreille. Les principes de l’identification des bovins (agrafes auriculaires) ainsi que des ovins, caprins et porcins (agrafes auriculaires ou tatouage) ont été harmonisés au sein de la CE. Les passeports internationaux ne sont délivrés et reconnus que pour les équidés enregistrés. La pérennité du numéro attribué aux équidés accompagnés de passeports permet leur identification permanente. Les principes relatifs à la délivrance et à l’enregistrement de ces numéros ont été proposés par les secteurs concernés, mais ils doivent encore recevoir l’agrément des autorités officielles. L’identification active au moyen de dispositifs électroniques n’est pas réglementée pour les équidés au sein de la CE, mais cette technique est à l’étude pour les animaux de ferme.

**Mots-clés**

Requisitos legales para la identificación y rastreabilidad de animales de granja en la Unión Europea

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Resumen
La legislación de la Comunidad Europea (CE) exige la identificación y el registro de todos los bovinos, ovinos, caprinos y porcinos. Para transacciones comerciales intracomunitarias, los bovinos deben acompañarse de un pasaporte y del oportuno certificado sanitario, además de llevar un crotal en cada oreja. Los principios que regulan la identificación activa de bovinos (con crotales) y ovinos, caprinos y porcinos (con crotales o tatuajes) están armonizados dentro de la CE. Sólo se expenden y reconocen pasaportes internacionales para caballos registrados. La implantación de los números de identidad individuales respondió a la voluntad de poder identificar de forma permanente a los équidos con pasaporte. Aunque los principios de emisión y registro de dichos números son obra de los sectores afectados, es menester que sean aprobados oficialmente. La legislación comunitaria no regula la identificación activa de équidos por dispositivos electrónicos, aunque están en marcha investigaciones para aplicar este tipo de procedimientos a los animales de granja.

Palabras clave

References


This Part contains the ‘HGP free’ requirements for meat and meat products and the animals from which they are derived where the meat and meat products are for export to a member state of the European Union; and are derived from an animal of the bovine species (other than an ineligible breeding bull or an ineligible breeding cow).

Animal identification and traceability have been components of technical cooperation projects in the fields of veterinary public health and food safety and quality (e.g. prevention and control of BSE and other zoonoses). The Programme on Food Quality Linked to Geographical Origin and Traditions has included regional seminars (Chile, Morocco, Serbia and Thailand), technical cooperation projects (Bhutan, Morocco, Tunisia and the Latin America and the Caribbean region), ten case studies in Latin America and six in Asia. These lessons present a sound basis for identifying the requirements for sustainable animal I&R systems. Enabling policy and legislative frameworks are necessary. Adequate governmental support, both technical and financial, is another prerequisite. The European Union doesn't require trading-partner countries to fulfill its traceability requirements, though the EU says common practice among some of its food-business operators is to ask for trading partners to comply with regulation as part of contractual agreements. Concerns

Some of the concerns with NAIS include financial, civil rights, and religious aspects of the program. The system provides a central database to track movement of animals within the EU and from third countries. In the EU, animals must be tagged with details of their origin and stamped with the traceability code of the abattoir when slaughtered. The tools used may vary from one country to another and can include ear tags, passports and bar codes, but must carry the same information.