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OIE Standards on Animal Identification and traceability

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Presentation layout

I

- **Background knowledge**

II

- **General Principles on Identification and Traceability of Live Animals**

III

- **Design and implementation of identification systems to achieve animal traceability**

IV

- **Conclusion**

Background knowledge



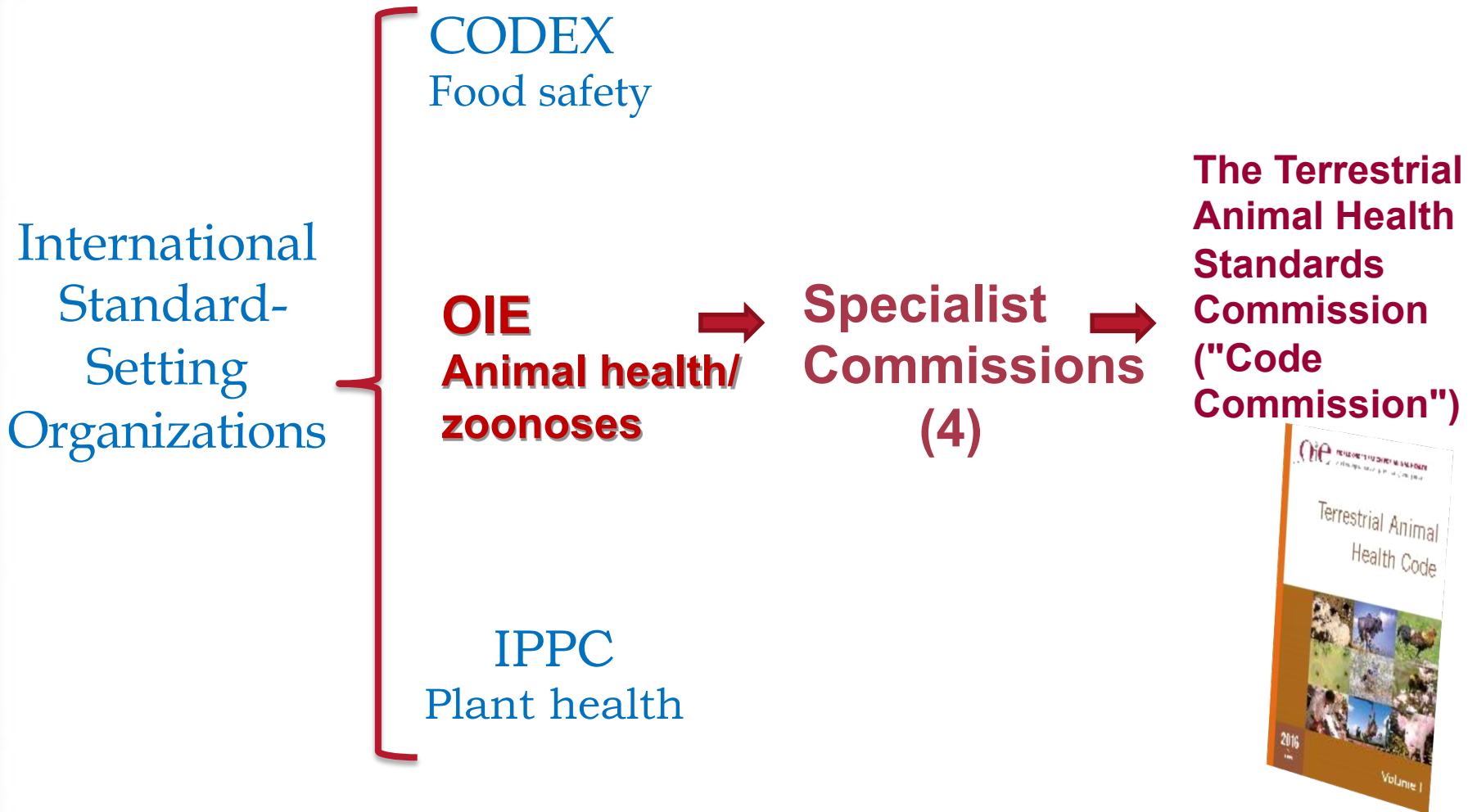
Marking animals : branding the skin of an animal with a red-hot iron/ use of different colours etc. is very ancient practice to indicate ownership and prevent theft



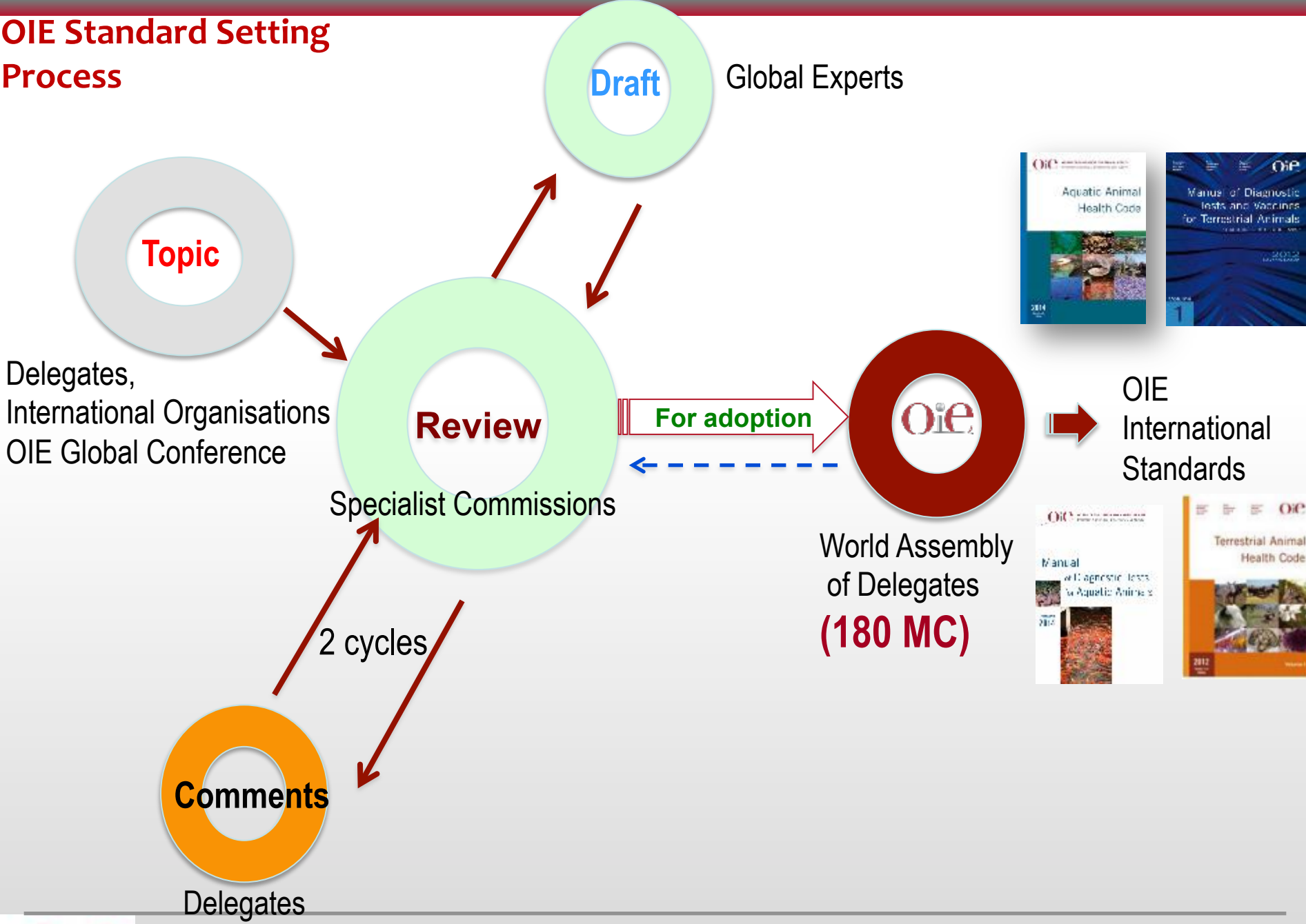
Modern management practices: more complex modes of animal identification (ear tagging, tattooing, use of microchips, digital ear tags, etc.)

Nowadays, animal identification and traceability are important management tools in animal health and food safety

Background knowledge



OIE Standard Setting Process



Background knowledge

1998: international seminar in Buenos Aires , Argentina .

1999: OIE Regional Conference ME

2001: an entire issue of the *Scientific and Technical Review*.

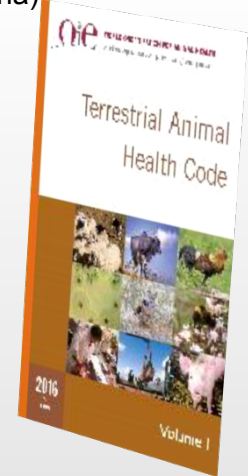
2004: OIE: MC questionnaire on animal identification and traceability

2005: OIE Regional Conference for Africa in Khartoum (Sudan)
OIE Ad hoc group

2006: adoption General Principles on Identification and Traceability of Live Animals

2007- Guidelines for the design and implementation of animal traceability

2009: First OIE Global Conference on Animal Identification and Traceability Buenos Aires (Argentina)



These are the basis for the current Chapters 4.1 and 4.2 of the TAHC

Examples of benefits of Animal ID & T

More effective herds/ flocks management

Herd/flock health
programmes

Breeding or genetic
improvement
programmes



Support measures to detect and control diseases

Surveillance

Early detection and
notification of
outbreaks

Rapid response

Control of animal
movements

Zoning or
compartmentalisation

Control of animal diseases contributes to:

Food Security: strong link with
Public Health

Public Health:
zoonoses, food safety

Market Access:
local, regional and
international

Poverty Alleviation

- Securing assets (animal capital)
- Increasing productivity and food production

Animal welfare

Examples of benefits of Animal ID &T

In international trade: more credibility (health certification and market access)

Prevent unjustified trade barriers



management of food safety and prevention food contamination incidents

Crisis prevention and response

Health certification

Maintaining consumer confidence

Sustainability of livestock production.

Consumer may be interested in characteristics of food production other than food safety

Animal welfare, ethics, origin & environmental issues

General Principles on Identification and Traceability of Live Animals

The objective - to outline the basic requirements for the design and implementation of an animal identification system to achieve traceability.

General principles – Definitions

ANIMAL IDENTIFICATION (ID)

Combination of the **identification** and **registration** of an animal **individually**, with a unique identifier, or **collectively** by its epidemiological unit or group, with a unique group identifier.

ANIMAL IDENTIFICATION SYSTEM

Inclusion and **linking** of components such as identification of establishments/ owners, the person(s) responsible for the animal(s), movements and other records with animal identification.

General principles

1- ID & T are tools for addressing **animal health** (including zoonoses) and **food safety** issues.

General principles

2) There is a **strong relationship** between **animal identification** and the **traceability** of animals and products of animal origin.

3) Animal traceability and traceability of products of animal origin should have **the capability to be linked** to achieve traceability throughout the animal production and food chain taking into account **relevant OIE and Codex Alimentarius standards.**

General principles

4) The objective(s) of animal identification and animal traceability for a particular country, zone or compartment and the approach used should be **clearly defined** following an assessment of the risks to be addressed and a consideration of the relevant factors.

They should be defined through **consultation** between the Veterinary Authority and relevant sectors/ stakeholders prior to implementation, and periodically reviewed.

General principles

5) Various factors may determine the system chosen for animal identification and animal traceability.

Factors to be taken into account when designing the system:

The outcomes of the risk assessment,
The animal and public health situation (including zoonoses) and related programmes,
Animal population parameters (such as species and breeds, numbers and distribution),

Types of production,
Animal movement patterns,
Available technologies,

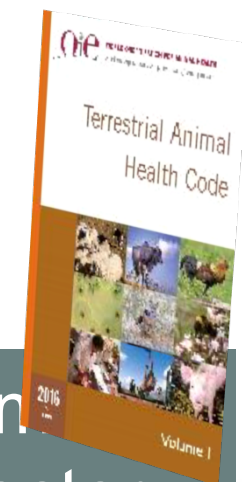
Trade in animals and animal products,
Cost/benefit analysis and other economic, geographical and environmental considerations,
Cultural aspects.

General principles

6) Animal identification and animal traceability should be **under the responsibility of the Veterinary Authority.**

Other Authorities may have jurisdiction over other aspects of the food chain, including the traceability of food.

General principles



7) The Veterinary Authority, with relevant government agencies and **in consultation** with the private sector, should establish a **legal framework**

To facilitate compatibility and consistency, **relevant international standards** and obligations should be taken into account.

General principles

Examples of elements to be included:

The objectives and scope,
Organisational arrangements including the choice of technologies used for identification and registration,

Obligations of all the parties involved including third parties implementing traceability systems,

Confidentiality and accessibility issues
The efficient exchange of information

General principles

8) Examples of common basic factors to be considered before implementation:

The legal framework,

Procedures,

The Competent Authority,

Identification of establishments/owners

Animal identification

Animal movements

General principles

9) The equivalent outcomes based on performance criteria rather than identical systems based on design criteria should be the basis for comparison of animal identification systems and animal traceability.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

These recommendations are based on the **general principles presented in Article 4.1.1.**

Whatever animal identification system the country adopts, it should **comply with relevant OIE standards**, including Chapters 5.10. to 5.12. for animals and animal products intended for export.

Each country should design a **programme** in accordance with the scope and relevant performance criteria to ensure that the desired animal traceability outcomes can be achieved.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

Definitions

Desired outcomes:

- Describe the **overall goals** of a programme, usually expressed in qualitative terms, e.g. ‘to help ensure that animals and/or animal products are safe and suitable for use’. Safety and suitability for use could be defined in terms such as animal health, food safety, trade and aspects of animal husbandry.

Performance criteria:

- Specifications for performance of a programme are usually expressed in **quantitative terms**, such as ‘all animals can be traced to the establishment of birth within 48 hours of an enquiry’.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

Definitions

Reporting: means advising the VA and other partner organisations as appropriate in accordance with the procedures listed in the programme.

Scope: specifies the targeted species, population and/or production/trade sector within a defined area (country, zone) or compartment that is the subject of the identification and traceability programme.

Transhumance: periodic/seasonal movements of animals between different pastures within or between countries.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

Key elements of an animal identification

✓ Desired outcomes

✓ Scope of animal identification systems

✓ Performance criteria

✓ Preliminary studies

✓ Design of the programme

✓ Legal framework

✓ Implementation

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

1. Desired outcomes

defined through **consultation** between the Veterinary Authority and interested parties:

- ✓ in the animal production and processing chain,
- ✓ veterinarians in private sector,
- ✓ scientific research organisations
- ✓ other public and private organisations.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

1. Desired outcomes

May be defined in terms of any or all of the following:

- a) **animal health** (e.g. disease surveillance and notification; detection and control of disease; vaccination programmes);
- b) **public health** (e.g. surveillance and control of zoonotic diseases and food safety);
- c) **management of emergencies** e.g. natural catastrophies or man-made events;
- d) **trade** (support for inspection and certification activities of Veterinary Services)
- e) **aspects of animal husbandry** such as animal performance, and genetic data.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

2. Scope of animal identification systems

Defined through **consultation** between the Veterinary Authority and other interested parties.

Often based on the definition of a species and sector, to take account of **particular characteristics of the farming systems** poultry in a defined compartment; cattle within a defined FMD free zone, pigs in pork export production

Different systems will be appropriate in accordance with the production systems used in countries and the nature of their industries and trade.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

3. Performance criteria

- ✓ Designed in **consultation** with interested parties.
- ✓ Depend on the desired outcomes and scope
- ✓ Usually described in **quantitative terms** in accordance with the epidemiology of the disease.
- ✓ For example:
 - Highly contagious diseases such as FMD tracing (tracing within 24-48 hours).
 - Food safety, animal tracing to support investigation of incidents may also be urgent.
 - Chronic animal diseases that are not zoonoses, it may be considered appropriate that animals can be traced over a longer period

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

4. Preliminary studies

Should take into account

- a) animal populations, species, distribution, herd management,
- b) farming and industry structures, production and location,
- c) animal health,
- d) public health,
- e) trade issues,
- f) aspects of animal husbandry,
- g) zoning and compartmentalisation,
- h) animal movement patterns (including transhumance),
- i) information management and communication,
- j) availability of resources (human and financial),

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

4. Preliminary studies (2)

Should take into account

- k) social and cultural aspects,
- l) stakeholder knowledge of the issues and expectations,
- m) gaps between current enabling legislation and what is needed long term,
- n) international experience,
- o) national experience,
- p) available technology
- q) existing identification system(s),
- r) expected benefits from the animal identification systems and animal traceability and to whom they accrue,
- s) issues pertaining to data ownership and access rights,
- t) reporting requirements.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

4. Preliminary studies (3)

Pilot projects may form part of the preliminary study:

- to test the animal identification system and animal traceability
- to gather information for the design and the implementation of the programme.

Economic analysis may consider costs, benefits, funding mechanisms and sustainability.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme

The programme should :

- be designed in **consultation** with the stakeholders to facilitate the implementation of the animal identification system and animal traceability.
- take into account the scope, performance criteria and desired outcomes as well as the results of any preliminary study.

format, content and context for all the specified documentation should be **standardized**

To protect and enhance the integrity of the system, procedures should be incorporated into the design of the programme to prevent, detect and correct **errors**

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (2)

Means of animal identification

Elements to be considered:

- the durability,
- Human resources,
- species and age of animals,
- required period of identification,
- cultural aspects,
- animal welfare,
- technology,
- compatibility and relevant standards,
- farming practices, production systems,
- animal population,
- climatic conditions,
- resistance to tampering,
- trade considerations,
- cost,
- retention and readability of the identification method.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (3)

Means of animal identification

The Veterinary Authority

- ✓ is responsible for **approving** the materials and equipment chosen
- ✓ is also responsible for **ensuring** that identifiers are unique and are used in accordance with the requirements of the AD.
- ✓ should **establish procedures** for AD & T

including:

- i) the establishment of birth, and time period within which an animal is born;
- ii) when animals are introduced into an establishment;
- iii) when an animal loses its identification or the identifier becomes unusable;
- iv) arrangements and rules for the destruction and/or reuse of identifiers;
- v) penalties for the tampering and/or removal of official animal identification devices.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (4)

Means of animal identification

Where **group identification** without a physical identifier is adequate documentation :

- should be created specifying at least the number of animals in the group, the species, the date of identification, the person legally responsible for the animals and/or establishment.
- constitutes a **unique group identifier**
- should **be updated** to be traceable if there are any changes.
- should also specify the unique group identifier where all animals in the group are physically identified with a group identifier, documentation.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (5)

Registration

i) **Procedures** need to be incorporated into the design of the programme in order to ensure that relevant events and information are registered in a timely and accurate manner.

ii) **Animals**

Animal identification and species should be registered for each establishment/owner. Other relevant information (e.g. date of birth, production category, sex, breed, number of animals of each species, animal identification of the parents).

iii) **Other events**

The registration of **animal movements** is necessary to achieve **animal traceability**.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (6)

Documentation

Documentation requirements should be clearly **defined and standardised**, in accordance with the scope, performance criteria and desired outcomes and supported by the legal framework.

Reporting

relevant information (such as animal identification, movement, events, changes in numbers of livestock, establishments) should be **reported to the VA** by the person responsible for the animals.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme ⁽⁷⁾

Information system

Should be designed in accordance with the scope, performance criteria and desired outcomes (paper based or electronic).

The following considerations are important:

- have the **potential for linkage to traceability** in the other parts of the food chain;
- minimize duplication;
- relevant components, including databases, should be compatible;
- confidentiality of data;
- appropriate safeguards to prevent the loss of data

The **Veterinary Authority** should have **access** to this information system as appropriate to meet the scope, performance criteria and desired outcomes.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

5. Design of the programme (8)

Laboratories

The results of diagnostic tests should record the animal identifier or the group identifier, the date of sample was taken from the animal and the establishment where the sample was collected.

Abattoirs, rendering plants, dead stock collection points, markets and assembly centres

should document arrangements for the maintenance of animal identification and animal traceability in compliance with the legal framework.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

6. Legal framework

should be established by the VA, with other relevant governmental agencies and **in consultation** with stakeholders, for the implementation and enforcement of AD & T in the country.

Animal identification, animal traceability and animal movement should be under the **responsibility of the Veterinary Authority**.

This legal framework should address:

- a) desired outcomes and scope;
- b) obligations of the Veterinary Authority and other parties;
- c) organisational arrangements, including the choice of technologies and methods used for the animal identification system and animal traceability;
- d) management of animal movement;
- e) confidentiality of data;
- f) data access / accessibility;
- g) checking, verification, inspection and penalties;
- h) where relevant, funding mechanisms;
- i) where relevant, arrangements to support a pilot project.



RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

7. Implementation

a) Action plan

Should be prepared specifying the **timetable** and including the **milestones** and **performance indicators**, the **human and financial resources**, and **checking, enforcement and verification** arrangements.

The following activities should be addressed in the action plan:

i) Communication to all parties

ii) Training programmes

Implemented to assist the Veterinary Services and other parties.

iii) Technical support

Should be provided to address practical problems.

RECOMMENDATIONS ON DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

7. Implementation (2)

b) Checking and verification

Checking activities should start at **the beginning of the implementation** to detect, prevent and correct errors and to provide feedback on programme design.

Verification should begin after a preliminary period as determined by the Veterinary Authority in order to determine compliance with the legal framework and operational requirements.

c) Auditing

under the authority of the Veterinary Authority:

- ✓ to detect any problems with the animal identification system and animal traceability and to identify possible improvements.

d) Review

The programme should be subject to periodic review, taking into account the results of checking, verification and auditing activities.

CONCLUSION

Animal Identification and traceability systems

- ✓ are key tools for controlling disease, managing animal production, assuring consumers of the safety of animal products and building consumer confidence;
- ✓ should be designed by the Veterinary Authority in collaboration with all stakeholders – for sustainability and success;
- ✓ should be custom made taking into account the unique situation of each MC;
- ✓ their comparison between MC should be founded on the equivalent outcomes based on performance criteria.

OIE Standard setting is an ongoing process. It is important for MC to be involved in this process to improve standards.

Thank you for your attention



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