THE IMPORTANCE OF LIVESTOCK IDENTIFICATION AND MOVEMENT CONTROL TO THE PROMOTION OF ANIMAL DISEASE CONTROL AND FACILITATION OF TRADE

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Summary: Livestock identification and the management of livestock movements are critical to the control of animal diseases and access to trade in animals and animal products. International standards for the control of animal diseases and for trade in livestock and livestock products are established under the WTO SPS Agreement. The OIE has the mandate from the WTO to set standards, guidelines and recommendations in relation to trade of livestock and livestock products. Many of the standards are incorporated in the OIE International Animal Health Code. These standards pose significant challenges for many developing countries where OIE List A and List B diseases are endemic and the animal health services have limited resources and capacity to deliver effective animal health programmes.

Members of the OIE Regional Commission for Africa were surveyed on aspects of livestock movement control and animal identification. Respondents described variable the capacity to implement systems for traceability and management of animal movements. The main obstacles to increasing trade were poor animal health status and the limited capacity of many animal health services.

Most countries have multiple neighbours and only half the countries are actively engaging their neighbours in collaboration on livestock movement control. Members indicated that illegal movements are common in most countries. More than half the countries implement charges for livestock movements and incentives to encourage legal movements were used by relatively few countries.

The most influential private stakeholders were thought to be livestock owners, livestock producer organisations, traders and exporters. The majority of members supported improved communication and active participation as the means of increasing private sector support for national programmes for livestock identification and movement management.

Livestock identification systems and registration of identifiers are in place in most countries, however, low cost traditional identification methods are most commonly used and data is recorded manually in most cases. Cost and cultural reasons are the main obstacles to adoption of more sophisticated methods.

Recommendations arising from this paper related to the need for Member Countries to adopt harmonised approaches to livestock identification and movement management and that improved disease control and increased access to trade will require strong co-operation between neighbouring countries and active participation by stakeholder groups.

1. INTRODUCTION

Livestock movements are the major avenue for the spread of animal diseases and hence are the most important obstacle to the control of animal diseases in most parts of the world. Livestock identification is an important tool that is an essential component of programmes for controlling animal diseases and to ensure the traceability and safety of livestock and livestock products. Traceability of livestock and livestock products is becoming increasingly important in the areas of public health and consumer protection.
At the 14th Conference of the OIE Regional Commission for Africa the importance of livestock movement control and livestock identification in relation to disease control and access to trade were identified as important topics for consideration at the next meeting.

In December 2002, a questionnaire containing 25 questions on aspects of livestock movement control and animal identification was distributed to Member Countries. Responses were received from Algeria, Botswana, Egypt, Ghana, Guinea, Mali, Morocco, Mauritius, Tanzania, Uganda, Zambia and Zimbabwe.

There are no specific definitions in the *International Animal Health Code* (1) for livestock movement control and livestock identification and, therefore, the following descriptions were used to help Member Countries to complete the questionnaire.

Livestock movement control involves the carrying out of any procedure to manage or control the movement of livestock species and it includes:

- Activities at check points, quarantine stations and by field staff to implement internal or international quarantine procedures,
- Carrying out responsibilities by livestock owners and all persons involved in trade in livestock,
- Legislative support,
- Incentives and penalties to encourage compliance,
- Maintaining records or databases of animal movements,
- Consultation with national and international stakeholders,
- Implementing relevant public awareness activities.

Identification of livestock involves all aspects of identification and traceability of livestock and their products and includes:

- Methods of identification of livestock to the herd or individual animal level and this includes colour markings, branding, marks in the ears or other parts of the body, tags applied to any part of the body, biological markers and electronic forms of identification,
- Documentation required for movements of livestock including permits, waybills, animal passports, etc.
- Legislation required to approve, enforce and prevent the removal or defacing of identifiers,
- Maintaining registers or records of animals and herds, and these can be manual or electronic,
- Implementing public awareness activities.

This paper describes the importance of livestock movement control and livestock identification to the promotion of animal disease control and facilitation of trade in animals and animal products.

### 2. INTERNATIONAL DEVELOPMENTS IN LIVESTOCK MOVEMENT CONTROL

The movement of livestock and their products has increased due to globalisation of trade. This has increased the spread of disease, increased the threats to human health and reduced consumer confidence in animal products (1).

Significant changes are occurring in the international environment for trade in animals and animal products as a result of the establishment of the World Trade Organization (WTO) and the impacts of globalisation. These changes are aimed to create a more transparent, scientific and risk based approach throughout the production chain. There are some signs that non justified barriers to trade in animals are being reduced. However, for many countries there are significant challenges to overcome before the benefits can be achieved. This includes the ability to control serious diseases of livestock and to meet the needs of importing countries in accordance with the WTO’s Sanitary and Phyto-sanitary (SPS) (4) Agreement.
The SPS Agreement offers potential for increased trade. However, it also preserves the right of importing countries to protect their animal health status by transparent and scientifically justifiable means. It also includes the concept of Appropriate Level of Protection (ALOP) whereby a country can choose a level of protection that it considers necessary to protect human or animal health. The OIE is given the responsibility for setting standards under this agreement and these are included in its International Animal Health Code (2). The Code also defines zoning¹ and regionalisation² as means of making progress with disease control and demonstrating different levels of animal health status. The standards required for movements of animals and animal products between zones/regions are also described.

It is important to understand the legal and illegal movement patterns of animals within a region. These are often significant avenues of disease risk and animal movement pathways will change periodically. This will depend on price. Monitoring livestock prices can be used to monitor potential changes in livestock movement patterns. It is important to recognise that these types of movements do occur and often in large numbers. The challenge is to manage these movements to minimise the risks. This requires an integrated approach to animal movement management involving planning, education, incentives, legislation and penalties when required.

Some traditional approaches to livestock movement control result in an increased spread of disease, because they drive movements around the legal checkpoints or do not serve any useful disease control function. In many cases, livestock movements within and between countries/zones are traditional and have been going on for a long time, and are considered as normal activities of people in the region. It may be necessary to recognise that these movements occur and that instead of tightening restrictions or banning such movements, it is often more effective to recognise them as legitimate trade in the region and to minimise the disease risks by managing these movements. For this purpose, bilateral and regional cooperation is essential.

In many parts of the world, there is a culture of mindless application of quarantine procedures and the establishment of checkpoints to control animal movements. Quarantine and check points should only be necessary for movements between countries/zones of different animal health status. Zones of different animal health status often do not follow national borders. It is more important to manage movements between zones of different status than across national borders. Therefore, it is important to review the role, function and effectiveness of existing and planned animal quarantine stations/check posts. On careful examination, it will be found that often they do not achieve their objectives. Often they are maintained only because they are a source of income for the government or the officers staffing them. There is an argument for creating incentives for owners who use the legal channels and this can be achieved by methods, such as removing charges and where technically justifiable, to render movement procedures simpler, cheaper and less time consuming.

3. LIVESTOCK IDENTIFICATION

Traceability is the basis of any future system for food safety and epidemiological surveillance for animal diseases. For this reason, there is growing demand for identification of livestock and livestock products from the point of origin to the point of consumption. While the main drivers for this are disease control, trade and food safety, there are other reasons why livestock owners will benefit from identifying their livestock. These include prevention of theft, animal performance recording, breeding, genetic improvement, management, livestock statistics and proof of ownership for prevention of theft, collateral, insurance and in some cases, financial assistance.

While livestock identification is not specifically mentioned in the SPS Agreement, some traceability measures have been incorporated in international standards. Wilson and Beers (3) describe this in some detail, “The WTO SPS agreement provides member countries with a right to implement traceability as an SPS measure. However, this right must be based on an assessment of the risks and be scientifically justified, appropriate to the circumstances, no more restrictive to trade than required and applied consistently, including between the country imposing the measure and other countries. Measures that are based on international standards are deemed to be necessary.

¹ “Zoning” is a procedure implemented by a country under the provisions of this Chapter with a view to defining geographical areas of different animal health status within its territory for the purpose of international trade, and in accordance with the recommendations stipulated in the relevant Chapters in the Code.

² Adjacent countries or parts of countries, which have the same animal health status and similar disease controls can be treated as a region.
If requested by an exporting country, importing countries must consider, on scientific merit, any claims of equivalence of alternative risk management measures and must adapt measures to regional conditions.”
While the European countries are driving the move to identification of animals and animal products, it will take some time to achieve full harmonisation. Standards, guidelines and systems of communication are planned, but not yet fully adopted. While many aspects of the European systems will not be appropriate in other regions, there are lessons to be learnt in regard to the need for harmonisation of standards and procedures and an integrated approach.

Livestock identification systems will receive widespread adoption where there are significant benefits and these must exceed the costs of the system used. It is likely that individual livestock owners will use practical and cost effective methods for identifying their animals and will adopt newer methods only where there is a clear benefit. In many countries, it will be the larger scale commercial and livestock exporting sectors that will respond to the economic drivers.

The ability to identify animals and to trace movements is an integral part of successful animal health programmes. In the past, this was based on practical and inexpensive systems of identification and recording movements. There is now a trend in the major importing markets to require identification throughout the food production, processing and trading chain and to use more sophisticated and expensive systems to do this.

Livestock identification requires systems for registration/approval of identifiers, systems for implementing identification of animals and means of recording movements as the animals are transported, change ownership, slaughtered, processed and distributed for consumption. There are many ways of identifying animals. These include individual recognition, application of identifying marks, notches in parts of the body, hot or cold branding, tattoos, tags (applied to ears, tails or other parts of the body), electronic devices (applied to tags or inserted under skin or in rumen), DNA testing and animal passports. In developed countries, there is increasing attention to the development and implementation of the more sophisticated electronic means of identification. Similarly, recording of animal movements can be done using paper based systems involving permits/waybills and manual databases and increasingly involves electronic means of monitoring and recording movements and storage in an electronic database.

Identification can be at the individual or the herd level. Identifiers also need to be safe, tamper proof and affordable. There are various alternatives and there is a need to decide what identifier(s) is most suitable for the purpose and will also meet the standards required. In any future systems planned for this region, participating countries will need to agree on standards for identification and data collection and storage.

There is a trend by some markets to require traceability by using specific technology or systems. This can result in unreasonable barriers to some developing countries. It is recommended that importers should be required to specify standards for traceability and that this be independent of the method and technology used. The approach should be to achieve equivalent outcomes rather than being bound to implementing technologies that may be impractical or unaffordable. This will provide greater flexibility to allow for regional differences and to encourage the development of practical and cost effective methods. This approach is consistent with the principle of equivalence.

4. RESPONSE TO THE QUESTIONNAIRE

A questionnaire containing 25 questions on aspects of livestock movement control and animal identification was distributed to Member Countries of the OIE Regional Commission for Africa. At the time of writing this paper, responses had been received from only 10 countries and for this reason, a full analysis has not been conducted. Despite the limited response, some useful information has been obtained and the main findings are provided in this report. Additional responses will be included in the conference presentation.

The main livestock species listed were cattle, small ruminants and poultry. Smaller numbers of pigs, equines, camels, ostriches and other species were also reported. The methods used for identification and movement control varied between these species.

The main obstacles to increased trade in livestock and animal products were the presence of serious diseases of significance to trade and the inadequate capacity and resources for animal health services in many countries. There were also concerns about prices, costs of production and the ability to supply the markets. One country identified non-tariff barriers as an important obstacle. Over half the respondents identified markets that had a requirement for traceability in their import protocols. The European Union was the most commonly listed market in this regard. Several countries are net importers of livestock and do not have export markets.
Only two countries were confident that in the case of a disease outbreak, they could successfully trace an animal from the abattoir to the original owner and location. Half the countries believed that they could correctly identify the source of the animal in more than half of the cases, and the remaining three could trace the animal to its origin in less than half of the cases.

All except one country has movement controls in place and the most common methods used were permits or similar documentation and checkpoints (domestic and export). Two countries listed zoning as a useful strategy.

The diseases of most concern for local movements were foot and mouth disease (FMD), contagious bovine pleuro-pneumonia (CBPP), Newcastle disease (ND), lumpy skin disease (LSD) and peste des petits ruminants (PPR) and those of most concern for export were FMD, CBPP, ND, LSD, African swine fever (ASF), PPR and brucellosis. Despite all but one country having legislation to control animal movements, eight countries stated that illegal movements of animals occur in their countries.

Most countries in the region have multiple neighbours (average 4.6, range 0-8) and half have written agreements with some or all of their neighbours. Only half have held meetings with neighbouring countries in the last twelve months and an average of 2.2 meetings were held.

Respondents listed in order of importance the private sector groups that have the most influence in relation to the movement of livestock and these were, in order of significance, livestock owners, livestock producer organisations, traders, exporters, commercial livestock companies, private vets and financiers.

The best ways to enlist the support of the private sector included the use of education/extension, increasing involvement of stakeholders in animal health programmes and implementing effective legislative approaches.

In relation to charging for certification of movement control, in half the countries animal health services charge for certification, other government agencies apply charges in 3/10 cases and three countries provide incentives to encourage legal movements of animals. These include removal of charges and taxation advantages.

Most countries (8) have a register for recording livestock owners and identifiers used to register their animals and 6/10 have legislation in place to support this. The identifiers most commonly used, in order of importance, were individual recognition, brands, tags and notches. Methods, such as electronic identification, DNA and animal passports were infrequently used and then mainly in domestic animals (dogs, cats and horses). Almost half the countries had an electronic database for recording information on animal identification.

In countries where animal movements are recorded, manual paper based systems predominate and only one country had an electronic system to record animal movements.

The main obstacles to the routine identification of livestock listed were cost, unavailability of suitability of identifiers and religious and cultural reasons.

REFERENCES


