

Supporting Claims of Freedom from Disease

Introduction

The creation of WTO and the subsequent signing of the Agreement on the application of sanitary and phytosanitary measures (SPS Agreement) have laid the foundation for the reduction of tariff barriers to trade. As a result, sanitary barriers will now be the only legitimate non-tariff barrier to trade in livestock and livestock products. Thus, countries wishing to restrict importation of livestock and/or livestock products from a specific country or region in order to safeguard the health of the national livestock population may be requested to justify their decision by providing a science-based risk analysis. Alternatively, countries wishing to export livestock and livestock products will be requested to substantiate claims of being free from specific livestock diseases. Both will require animal health data of a quality and quantity which is currently not available in a large number of countries, particularly developing ones.

Public veterinary service responsibilities are focusing increasingly on only two issues -- facilitation of international trade and public health. Carrying out the required tasks under these responsibilities is, of course, neither simple nor inexpensive. Clinical and production medicine, vaccination campaigns and other tasks that more directly benefit the livestock owner or producer, which are rather labor or time intensive, or routine or for which there are no economies of scale are increasingly being relegated to the private sector for funding, organization and execution. Execution of some of these tasks can be, however, contracted out by the public sector for private sector execution but supervised by the public veterinary service. With this focus of responsibilities by the public veterinary services, they can organize and finance their structure to carry out priority tasks of a regulatory, supervisory and investigation nature that relate to international trade and public health. This paper focuses on the legitimate public sector responsibility of substantiating claims of disease freedom required to gain access to export markets.

Proving freedom from disease

Generally speaking, accreditation of disease freedom is possible when there is no clinical, epidemiological or any other evidence of disease or agent of disease presence in a given period of time within a given geographical area. To validate such claims adequate surveillance systems must be in place. The specific requirements for official recognition of freedom from disease by the OIE depend on the disease under consideration. Table 1 presents minimal conditions a country or region has to fulfil in order to be recognized free from some selected OIE List A diseases.

Table 1 Minimum requirements for a country/region to be declared free from disease (OIE Animal Health Code)

<i>DISEASE</i>	<i>No Vaccination</i>		<i>Vaccination</i>	
	<i>1st Recognition</i>	<i>After Outbreak</i>	<i>1st Recognition</i>	<i>After Outbreak</i>
Foot and mouth disease (FMD)	12 months	3 months (stamping out) (a)	24 months	12 months (stamping out) 24 months (no stamping out)

Classical swine fever (CSF)	24 months	6 months (stamping out)	24 months	12 months (stamping out)
African swine fever (ASF)	36 months	12 months (stamping out)		
Avian influenza (AI)	36 months	6 months (stamping out)	36 months	6 months (stamping out)

(a) plus surveillance and serology

As illustrated by the above table, it may take a considerable length of time after the last recorded incident of disease for a country to potentially qualify for 'freedom from disease X'. A minor episode towards the end of the qualifying period could constitute a serious setback with enormous financial losses for the affected industry. The fear of such severe consequences may affect the willingness of individuals or official bodies to report what they consider a minor incident.

The role of wildlife as a reservoir for a disease agent, the risk wildlife poses to domestic livestock and its importance for obtaining disease-free status will probably have to be negotiated on a case by case basis, e.g. brucellosis in some bison herds in the USA, CSF and Aujeszky disease in some wild boar populations in Europe, tuberculosis in badgers in some regions of the UK, etc.

When one of the diseases listed in Table 1 is reintroduced into a country, stamping out is the only recognized method of disease control if that country does not wish to go through the qualifying process from the start. However, the stamping out policy may become cause for public concern once a disease outbreak affects a critical number of holdings and large numbers of animals have to be slaughtered. The possibility of judicious use of vaccination with marker vaccines in the event of an outbreak of CSF is being discussed within the EU after the devastating consequences of the recent epidemics in The Netherlands and Germany.

To prove freedom from disease, a passive and historical register of disease occurrence, although valuable, is not enough. Official Veterinary Services must have a credible surveillance system where (a) any suspicious signs of disease activity are reported and (b) statistically selected samples from the host population (or an indicator population, e.g. sheep in a country where cattle are vaccinated against FMD) are collected in order to detect clinical signs or other evidence of transmission of infection. In either case, suspicion of disease must be followed by quarantine, confirmatory diagnostic work and any necessary disease control activities.

There will be a very strong requirement to increasingly involve farmers and producers in disease control and eradication efforts and consequently in animal health information systems. In order to encourage their participation, it will be necessary to convince them of the potential benefits of their involvement. Ideally, disease information systems should be suitably tailored for different production systems to account for variation in disease manifestation and importance (eg. FMD manifests itself very differently in dairy herds than in extensively managed beef cattle, Aujeszkys disease may be important for commercial pig producers but of very little concern to smallholders raising pigs in their back yard). Furthermore, information systems should cater for information requirements of producers which normally are not merely disease but mainly production-oriented. Traditionally, veterinary information systems have been too narrowly focused and provided producers with little valuable feedback.

More consideration should be given to accurate spatial referencing of disease (and production) data. In

doing so, epidemiological and ecological characteristics of the area should be of primary interest rather than administrative boundaries.

Diagnosis of infection requires a reliable diagnostic capability using internationally recognized materials and techniques (e.g. OIE manual on recommended diagnostic techniques), which are applied by well-trained technicians. International reference laboratories will have a very important role to play in assisting in the development of national diagnostic capacities and the accreditation of national laboratories.

Disease identification without reporting and application of control and eradication measures potentially allows spread of disease and will not help countries increase their international credibility. Rapid and effective response to notifiable animal diseases requires an appropriate legislative basis, the determination and capacity to enforce this legislation (not always given in remote areas), trained personnel as well as sound contingency plans whose practicability has been established.

The capacity to analyze, integrate and interpret large amounts of data coming from different sources is not particularly well developed in most veterinary services. However, this capacity is important in order to target and monitor the effectiveness of animal health interventions and to develop sound disease control/eradication policies. Internationally recognized collaborating centers can play an important role in developing and standardizing methodologies in specific areas such as geographical information systems, surveillance and monitoring, decision support and policy development and assist countries in strengthening the respective capabilities of their veterinary services.

Some of the above difficulties can be overcome by the introduction of the provision of ' regionalization ', which has e.g. been applied within the EU during the recent CSF outbreaks. Historically, if presence of a disease was notified or suspected within a zone inside the borders of a given country, the disease status of this zone compromised the status of the whole country. One negative impact of the country-by-country approach was that it often was a disincentive to producers in areas with relatively moderate disease prevalence to improve their husbandry and animal health management practices because, regardless of their efforts, they would continue to be denied market access. Now, health status can be established on a regional basis within a country or zones between countries if the appropriate veterinary infrastructure to maintain the difference in health status between adjacent areas is in place.

An important criterion for the international credibility of official veterinary services is transparency, i.e. their proven willingness to divulge truthful information on animal diseases and openness to external scrutiny. Transparency also includes the ability to provide reliable information on the financial, administrative and technical resources available to ensure that the animal health situation is accurately known and that competent authorities are in control.

Conclusions

In order to obtain official recognition of disease freedom, countries will have to provide substantial evidence to OIE and/or trade partners. Therefore, the enhancement of animal health information systems required to provide reliable information on the health status of a given population within a given region will be an important activity for veterinary/livestock services in all countries wishing to participate in international trade.

These information systems will require increased producer involvement, should be production system oriented and spatially referenced, make increased use of sample-based studies and active data collection, and cater for information requirements of producers to stimulate their participation.

In order to maximize the utility of the collected data, veterinary services must improve their data analysis and interpretation capacities and ensure timely dissemination of information both at national and international level. Results of data analysis and interpretation should lead to more effective and widely accepted disease control policies.