

VIRTUAL MOBILITY (VM) GRANT REPORT TEMPLATE

This report is submitted by the VM grantee to VNS Manager, who will coordinate the approval on behalf of the Action MC.

Action number: CA 17110

VM grant title: A review to describe the cattle export supply chains in Europe

VM grant start and end date: 06/09/2021 to 27/09/2021

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Description of the outcomes and achieved outputs (including any specific Action objective and deliverables, or publications resulting from the Virtual Mobility).

The main objective of the Virtual Mobility Grant (VM) was to review scientific and grey literature to describe the cattle export supply chains in Europe in relation to WG4 of Cost Action Sound Control, which focuses on developing methodologies for objective comparison of outputs from different input-based control programmes. For this purpose, the latest articles and grey literatures about EU cattle trade and the role of different stakeholders have been deeply reviewed.

Main outcomes and outputs

This VM activity has contributed to comparing the differences for disease control programs and cattle export supply chains of different countries. Moreover, this activity has been very beneficial to understand the role of different actors involved in cattle trade supply chains with existing preventive health measures to identify critical control points for safe cattle trade.

The non-regulated disease control programs and cattle export supply chains of every country can be different according to different factors. The crucial issue to develop a disease control plan is study within collaboration with every stakeholder. A disease control program should be based on efficient and effective Veterinary Services and the participation of producers and other stakeholders.

Disease management systems that consider livestock systems and socio-economic conditions of the countries, risks and stakeholders in the animal value chain would be effective. Efficient health control programs allow for the safe trade of cattle between the countries. The main factors to be considered during the animal movement are national and international regulations. The regulation related to inter and intra community trade of farm animals should be based on protect animal health, public health, and

animal welfare.

The types of cattle traded

Every year, millions of livestock is transported within and outside of the European Union for breeding, fattening and slaughtering purposes. The types of cattle traded and distribution of animals could be different according to consumer or producer demand, genetic capacity of the animals and quality, product prices, country regulations, etc. In general, there are two types of cattle that are traded: live and product (meat or dairy) cattle. Live cattle, slaughter beef cattle, fattening beef cattle, dairy and beef breeding cattle have been traded through the EU and imported outside the country.

Description of the benefits to the COST Action Strategy (what and how).

Main outputs from this activity was follows,

- a. Identifying and characterizing the cattle trade routes in Europe is essential for understanding who are the main stakeholders and their roles in cattle trade
- b. Identifying and understanding the stakeholders and their roles is essential for determining the information that will be required for decision making in cattle trade
- c. Knowing the stakeholder information needs is essential for defining the research needed to develop useful output based surveillance that meets the needs of stakeholders
- d. Identifying and understanding the role of cattle producers in the implementation of existing programs and control of diseases in cattle trade.

The cattle trade networks have been shown to be highly heterogeneous depending on the requirements of the country. The cattle supply chain is a very complex system, involving livestock farms, transporters, slaughterhouses, retailers and consumers. A typical supply chain for live cattle consists of owners/producers, agents, traders (wholesalers), local traders (retailers), official controllers and others.

Trade restrictions by the government and farm-specific restrictions according to previous experience play a vital role in the establishing a cattle supply chain. The cattle supply chain mainly depends on the quality of the animals of the farms/region/country, raising purpose, cattle price, diseases etc.

Mass gathering during collection, transport and distribution can be a prime risk factor for the spread of contagious diseases. Intra-EU trade of livestock represents 85% of transports, while 15% of transport is headed to extra-EU destinations. Sometimes many cattle are transported very long distances from one country to another country. Sometimes, instead of directly importing, imports are carried out by passing through some countries or by collecting animals from different countries and this can be a great risk for diseases transmission.

The cattle trade between all involved stakeholders constitute a complex network. Cattle producers sell

or purchase animals to different trade partners. In general, the use of export/import companies for cattle trade is common among the farmers. Support services providers, official authorities, collection centers, veterinary technicians or veterinary doctors, farm staff are the other actors having a less or more role in cattle trade.

Understanding the structure of cattle contacts and studying the routes, frequency and the risks associated with animal movement represents a prerequisite for effective animal and zoonotic disease surveillance and control.

Animal movements are carried out according to general and country-specific regulations. Almost in all countries import or export applications are carried out under the control of the official institutions (Government, meat and milk board, general directorate of agricultural enterprises). In general, the farmers export/import the animals with help of a company. Along with the farmers the traders play an essential role among dairy or beef farmers in cattle trade. The export/import company has control of all supply chain arrangements for livestock transport, management and slaughter according to national and international regulations.

The farmers are the main actors in cattle trade and they do not want purchasing animals from high specific disease risk regions in normal conditions. Their main goal is to choose the best cows for their farms after considering a whole range of animal characteristics. Some of the roles of cattle producers in the implementation of existing programs and control of diseases in cattle trade should be as follows,

- ✓ Testing for the most common non-regulated diseases all new-born calves from exported breeding cattles
- ✓ Identification of traded cattle with non-negative results
- ✓ Isolation of high infectious risk cattle
- ✓ Improving farmer and stakeholder knowledge of non-regulated diseases
- ✓ Improving awareness of biosecurity principles

Every country has a cattle supply chain and controls cattle diseases in its own way. Although the measures for the prevention of diseases are basically the same, there may be differences according to the potential risk factors. It seems that the best strategy to protect countries at risk of non-regulated diseases is the implementation of regional monitoring and control programmes in endemic countries, as well as the establishment of early warning systems in the countries at risk (vaccination of imported animals, quarantines and testing of a proportion of imported animals, etc).

Description of the virtual collaboration (including constructive reflection on activities undertaken, identified successful practices and lessons learned).

In this VM activity, the health control programs of different countries for non-regulated cattle diseases and the responsibilities of the different stakeholders involved in the animal trade have been investigated. Dr. John Berezowski who is expert on epidemiology, health surveillance, one health and zoonotic diseases made valuable contributions to this VM activity. We held two individual virtual meetings with John Berezowski during the activity to discuss/update the outcomes, works etc.. Search

strings has developed to identify appropriate literature. Inclusion/exclusion criterias has developed initially and updated as the activity progresses. Title and abstracts have screened to identify literature that fits the inclusion criteria. Then, literature meeting the criteria has reviewed and information extracted.

One of the overall objectives of cost action sound control is to develop a joint research agenda with the purpose of developing novel and easy to use methodologies for the comparison of disease control programmes carried out in different regions and with different designs. Objective and standardised comparison of the outputs of different health control programmes is very important to guarantee safe trade.

The cornerstone of prevention of the spread of animal diseases is supervision and certification as well as to implement general biosecurity rules. **The health control programs vary between countries. Some countries has successfully implemented country-specific control programs for infectious cattle diseases that are listed under C, D, E in the new animal health law.** But the non-regulated cattle diseases had heterogenous prevalence levels between countries. This can cause difficulties for intra community trade as livestock trade can introduce diseases into countries that are free-from diseases. The more the harmonisation of the rules for animal health conditions and requirements for animal and animal products among the countries, the more successful disease prevention will be.

An effective traceability system facilitates the identification of affected animals or herds. Countries should develop emergency preparedness and contingency plans for immediate action for diseases and emergency response plans should be up to date. Commission Delegated Regulation (EU) 2020/689 describes the conditions necessary to achieve and maintain disease-free status. This regulation will also be beneficial for many other countries importing cattle from Europe.