

# The role of veterinarians in the farm-to-fork food chain and the underlying legal framework

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## Summary

While the metaphor 'farm to fork' is a simple way of describing the chain that starts with the animal and follows through to the food delivered to consumers, there is a danger it could convey the idea that it only covers the food chain. The author believes that the expression should be understood to refer to a broader field – which he calls the 'veterinary domain' – which includes all aspects of animal use and management and the goals of veterinary public health, which is itself defined.

Within the veterinary domain, it is veterinarians who are the guarantors of animal health and protectors of animal resources, providing a vital component of food security and public safety. Historical and geographical references show that this role is vulnerable and must be protected to ensure its existence and quality, not only for the benefit of those involved, but above all for society as a whole.

As the organisation of such protection involves granting monopolies, special attention must be paid to the conditions governing veterinary training and practice. Protection brings duties and requires control mechanisms, which are generally entrusted to veterinary statutory bodies. The entire mechanism must therefore be covered by specific legislation, which is now embodied in Article 3.4.6. of the *Terrestrial Animal Health Code* of the World Organisation for Animal Health.

However, there is a danger of destroying a system, which has evolved over many years and has proven its worth, by an insistence on free-trade dogma that rejects the relationship between the health and veterinary professions.

## Keywords

Legislation – Safety – Veterinary domain – Veterinary profession – Veterinary public health.

## Introduction

The expression 'farm to fork' is a metaphor that describes a continuous chain leading from the production of livestock to the consumption of animal products. These three simple words describe a concept that encompasses a multitude of interwoven relationships. It is a catchy expression, but it should not be used to describe the food chain only, as this could lead us to view the food chain as separate from the wider sphere to which it belongs: the veterinary domain.

Although the author acknowledges its educational value, he fears that it gives a limited picture of who and what is involved. In particular, the term should be understood to

include all animals, which should not be considered merely as commodities.

He believes, therefore, that its meaning should be broadened and that a more in-depth examination is needed, first of animals and second of the objective of the farm-to-fork concept: veterinary public health.

Within this context, veterinary science takes its natural place as a key instrument. While the way in which it is practised varies greatly, any society wishing to ensure its own safety will have to adopt an appropriate legal framework to guarantee a sufficient supply of quality veterinary services. Although it would be unrealistic to seek to define a universal system, a number of constants can be identified.

## Holistic approach to human–animal relationships

Animals have always accompanied human evolution and are at the centre of a set of relationships with humans, some of which are vital, as Figure 1 illustrates. The diagram merely lists these links without considering their relative importance, which varies widely according to the place, culture or period. These variations aside, this diagram shows that, whatever the context, the other links cannot be ignored, which is to say that we cannot discuss the food aspects while ignoring the animal welfare or animal health aspects.

### Utilities

The first group covers what we call ‘utilities’. The first of these is food, because a common feature of all humans is that they have to eat. According to the database of the Food and Agriculture Organization of the United Nations (FAO) (5), animal foodstuffs account for between 2% and 32% of people’s calorie intake and between 13% and 60% of their protein requirements, depending on the country.

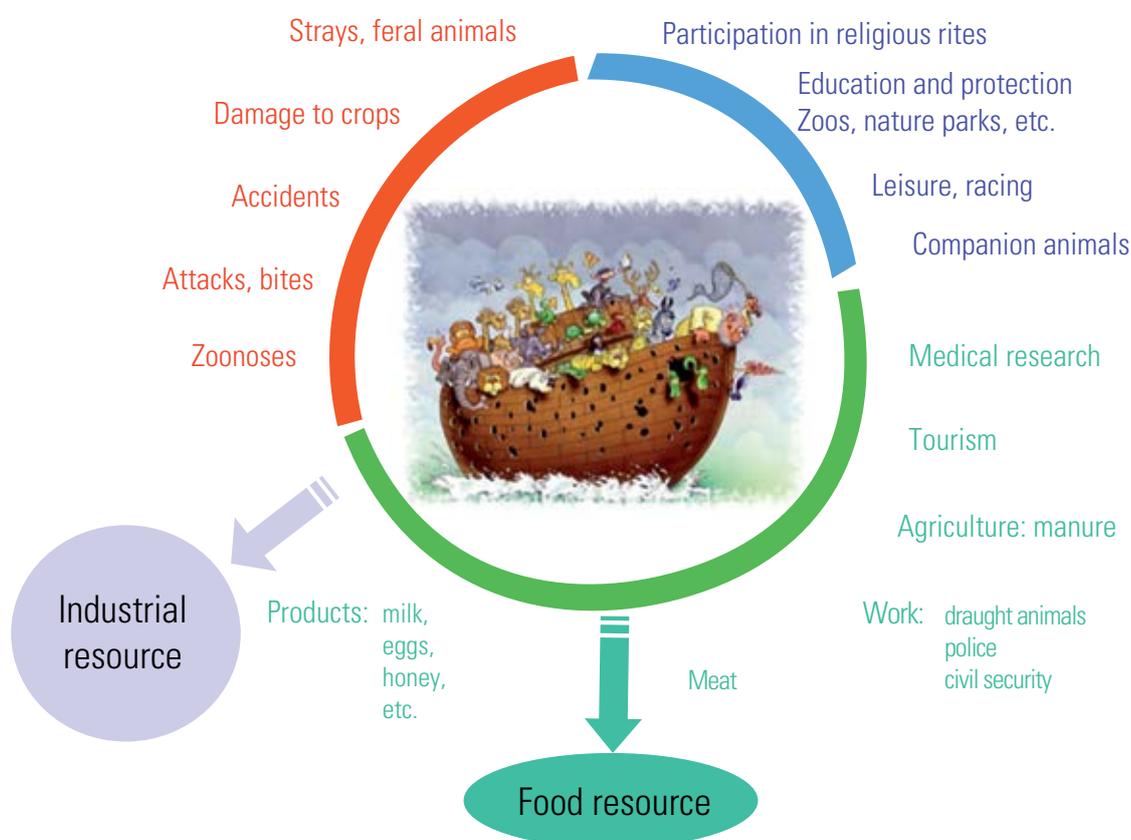
In many regions, animals are also used in crop production for their draught power and manure. This is why a foot and mouth disease epidemic can cause a 50% loss of rice production for a farmer in South-East Asia (12). Animals must therefore be considered as collaborating indirectly in agriculture and are useful even to vegetarians!

Animals are not only useful, they also provide major outputs in 100 or more countries, including 5.7 million tonnes of hides (4) and 2 million tonnes of wool (14). Animals therefore play an important role in the economic security of many countries. For example, in Mali, livestock production accounts for 15% of gross domestic product and involves 30% of the population (6).

Animals also provide many other services, ranging from rescue to medicine.

### Cultural links

The systematic depiction of animals in cave art, where they are the main theme (2), shows that animals occupy a special place in the human imagination and consciousness. Since time immemorial, animals have figured prominently in our



**Fig. 1**

### The place of animals in society: their impact, their ‘uses’ and their links with humans

Three main groups of links can be identified, although there is considerable uncertainty regarding the dividing lines between them

subconscious and this could be one of the reasons why we are so fond of them. It would indicate that, far from being a secondary consideration, the issue of animal welfare has long been a concern, that it is one of the essential links, and that veterinary public health should take it properly into account, because well-being is part of the very definition of health.

## Drawbacks

Nevertheless, human–animal cohabitation is not always easy. Wild animals, strays and feral animals pose a marginal direct threat to humans, livestock and crops. Transhumance can also be a source of conflict, sometimes serious, between herders and farmers in certain areas. Elsewhere (8), the proliferation of stray dogs can seriously undermine goat farming or cause traffic accidents.

Such problems are hardly new, as illustrated by an order of the aldermen of Amiens in 1413 stating that: ‘Any animal discovered straying will have one paw amputated the first time, a second paw in the event of a recurrence, and it will then be handed over to the executioner if the owner has still not understood’ (1).

Finally, zoonoses and diseases transmitted by animals or animal foodstuffs are a serious concern and addressing this problem represents a major part of the activities of veterinary public health departments.

## Consequences

This list shows that animals play an important and complex role in three interlinked areas – material wealth, culture and security – which, most importantly, have no scale of measurement, because everyone will assign a different priority to security, ethics or profit, according to their personal framework of reference. In a diagram with three axes representing the importance given to the three areas, different people would position the same subject differently and the final consensus would contain an element of all these different positions. As Article 3.4.2. of the OIE *Terrestrial Animal Health Code* (19) refers to acceptability in the quality criteria for legislation, overall coherence between the technical objective and the socio-cultural context of time and place – that is to say, this consensus – becomes a necessity. Livestock production, animal foodstuff safety and animal welfare are interdependent and this in itself justifies the ‘farm to fork’ concept.

The fact that animals are at the heart of many human activities, some of which are vital, makes poor animal health a constraint that must be controlled, meaning that veterinarians are key players. For this reason they should not be seen simply as animal doctors, but as public health

and safety professionals; veterinary interventions should not be trivialised or reduced to techniques but instead viewed in terms of their objective.

Shifting the focus to animals themselves maximises the scope of the ‘farm to fork’ concept and helps us understand that the expression, which *a priori* relates to the food chain only, must be understood to refer to an entire domain (what we call the veterinary domain) and to veterinary public health.

## Health, public health and veterinary public health

The constitution of the World Health Organization (WHO) was adopted at the International Health Conference held in New York from 19 June to 22 July 1946. It was signed by the representatives of 61 countries on 22 July 1946 and came into force on 7 April 1948 (15). In this constitution the concept of health, which had previously been associated solely with the absence of disease, was broadened to include a psycho-social dimension: ‘Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’.

The concept of public health is more difficult to define and many attempts have been made. Looking beyond the 1952 WHO definition (16), a study argued that the adjective ‘public’ should be used to characterise the level of analysis, i.e. that of the population (9). The addition of the term ‘veterinary’ introduces a new level of complexity!

The joint meeting of WHO, the World Organisation for Animal Health (OIE) and FAO in Teramo (Italy) in 1999 (7) defined veterinary public health as: ‘the contributions to the physical, mental and social well-being of humans through an understanding and application of veterinary science’. However, the author prefers the definition proposed by the French Veterinary Academy (*Académie Vétérinaire de France*) at its meeting on 15 May 1997. They consider that ‘veterinary public health’ refers to all actions directly or indirectly related to animals, their products or their diseases, provided that these actions have the effect or purpose of maintaining, protecting or improving human health. This definition introduces not only the concepts of maintenance, protection and improvement but also that of ‘all actions’, rather than just veterinary science. The latter is a very important point because it extends actions to the entire agrifood sector.

Considering all these definitions, it is clear that veterinary public health covers the ‘farm to fork’ domain.

This discussion is neither theoretical nor inconsequential because it has major consequences: it clearly conflicts

with the school of thought that seeks to reduce the term 'veterinary public health' solely to food safety, foodborne animal diseases and zoonoses and separates it from animal health and animal welfare.

Not including animal health and animal welfare in the definition of 'veterinary public health' creates two separately managed divisions. The author considers this to be a serious 'error', unless that is the real intent. Nobody denies that health (a concept that readily includes veterinary public health) is one of the major state responsibilities, but by excluding animal health from the definition of veterinary public health we implicitly deny that it belongs. Such reductionism would eventually lead to animal health becoming a marginal activity, resulting in the virtual disappearance of Veterinary Services.

This thinking is apparent in regulations denying that veterinary medicine is a health profession and claiming that it should be subject to ordinary competition in a large service market (3). Some 2,500 years of veterinary history and many major health crises are manifestly not enough to open the eyes of technocrats to the strategic importance of food security and hence of veterinary science. Nevertheless, it is precisely because they contribute to food security and safety that Veterinary Services (in the OIE meaning of the term) are considered to be a global public good. It follows that it is highly risky to separate animal health from the safety of animal foodstuffs.

This wider definition of veterinary public health, which is used to describe a homogeneous domain and avoid compartmentalising its management (so as to avert the risk of losing control over it), is very important and must be fiercely defended.

## The veterinary domain

This domain is structured not around veterinary activities but around the objectives to be achieved. These objectives are to:

- ensure food security by producing a sufficient quantity of animal protein
- provide economic security for people whose livelihood depends on livestock production or trade in animals
- provide public protection (health and safety) against dangerous animals and zoonosis vectors
- ensure the safety of animal foodstuffs.

A coherent diagram can be drawn of all the elements to be controlled, in particular the animal disease surveillance and management required to achieve these objectives

(Fig. 2). This diagram depicts a veterinary domain to which the wider definition of veterinary public health and the 'farm to fork' image fully apply.

Each of the boxes in the diagram is itself complex, but only activities relating to the definition of veterinary public health have been included.

Activities not depicted in the diagram are activities over which the state does not exercise authority.

This construction has four key consequences:

- veterinary medicine is not the only profession with a connection to the veterinary domain; in other words the latter is not restricted to veterinarians and is necessarily multidisciplinary
- in contrast, certain critical points are the sole preserve of veterinarians and their presence is mandatory
- this diagram only functions properly if the links between the different activities are coherent and allow the harmonisation of actions and the circulation of information
- any organisational model capable of coordinating all the functions and achieving the objectives is acceptable.

## From farm to fork

The relevance of the farm-to-fork concept, based on a definition of veterinary public health, can be discussed from three perspectives.

### The scope of the veterinary domain

It is easy to see that any health event at any level of the diagram could have an impact on the health of the parties involved and final consumers or, conversely, on animals.

Security would appear to be optimal when all actions are coordinated and the information from any one sector is used to improve the others. It would seem clear that controlling one point in isolation is not enough to guarantee the security of the system and that oversight of the whole is required. A study of the incidence of salmonellosis in France, showing that, between 1998 and 2003, 'veterinary' measures on livestock farms resulted in an annual 20% reduction of salmonellosis in humans due to *Salmonella* Enteritidis (11), demonstrates the benefit of a systemic vision.

To ensure optimum safety 'on the plate' it is vital to control every link in the production chain: given the large scope of the veterinary domain, the broader farm-to-fork concept is therefore perfectly relevant.

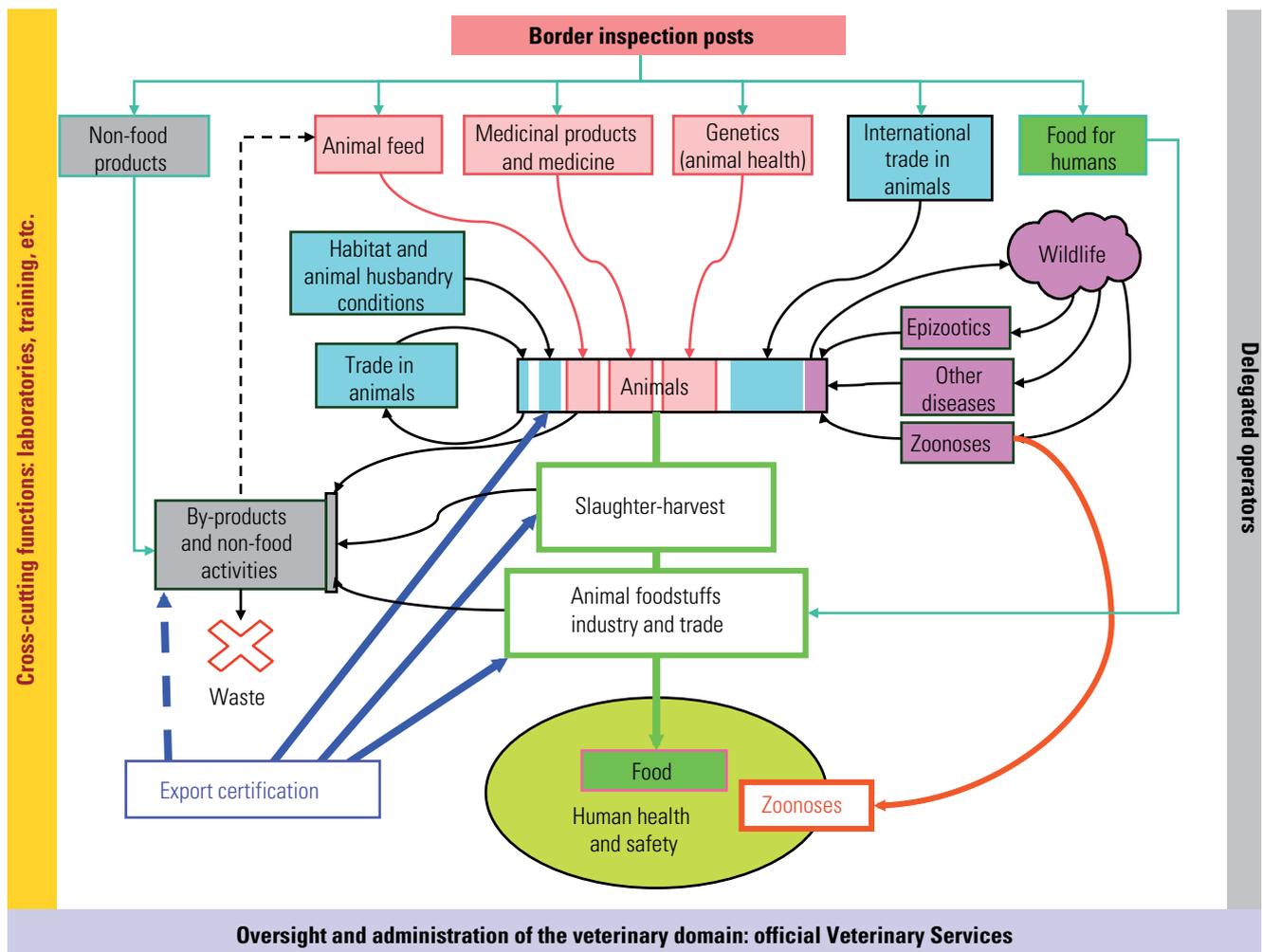


Fig. 2

**The veterinary domain**

Animals, in the centre, are the point of entry into the food chain. All the elements that could contaminate it, such as veterinary medicinal products or animal feed, and all the elements that contribute to protecting the resource, including veterinary medicine, must be controlled. This may require regulation of areas that are not directly connected to the food chain, such as vocational training or laboratories

**The organisation of the veterinary domain**

Although there is something of a consensus on the function of the veterinary domain, its administration, i.e. the distribution of tasks among the various players, is much less clear and we must understand the expression as describing a model of administration.

Traditionally, risk management is based on:

- balanced operating rules, adapted to the context and evolving, corresponding to each of the elements in the diagram
- means for the surveillance and detection of any animal health event at any point in the chain
- rapid and appropriate means of intervention

- exploiting information and results to improve the rules for prevention and administration.

We can see that this list describes a traditional quality-control loop.

However, a quality system cannot really function unless every step of the loop is coordinated or if certain key elements of the system are governed by separate loops.

Although different ministerial departments are entitled to intervene, ‘it is common for administrations, in the performance of their tasks, to seek to reserve inviolable fiefdoms of expertise’ (13). This often leads to partitioning based on material definitions (the product), methods (types of investigation) or objectives (health, trade, etc.), resulting in multiple interventions and reduced overall efficiency, while ignoring the fact that the state has sole responsibility.

The issue should therefore be addressed not in terms of reserved domains but in terms of efficiency, less concerned with partitioning the domain to match the pieces with the different administrations than with designating one of them to coordinate the whole.

This means that the farm-to-fork concept should also be applied to the management of the veterinary domain.

### **The politics and geography of the veterinary domain**

The third perspective concerns the position of the veterinary domain in the organisation of the state. The importance of this point appears to be underestimated and current trends towards decentralisation that fail to take it into account are placing the domain under threat.

Responsibility for controlling veterinary public health lies with the state, and its ability to do this successfully depends on the capacity for coordinated oversight and response. However, as fragmentation between the central government and local authorities breaks the chain of command, decentralisation, which makes perfect sense economically, appears to be counterproductive in veterinary matters.

It is clear, therefore, that the farm-to-fork concept also has a geographical and political dimension.

The geographical dimension can be far-reaching and includes international certification: livestock production and products are certified in the country of origin for use thousands of kilometres away. It goes without saying that this is made possible only by international certification rules that consider the system as a whole.

All in all, the broader farm-to-fork concept appears to be particularly relevant from all three perspectives and justifies the proposal for integrated management of the domain in which veterinarians have a natural place.

## **The role of veterinarians**

A 'veterinarian' should be understood to mean a person who has the minimum competencies defined by the OIE (17). Veterinarians are highly skilled professionals capable not only of performing medical procedures, but also, and above all, of comprehending the full complexity of their context and objective. Veterinary medicine should not be confused with merely executing medical procedures that could be handled by less-qualified personnel: knowing how to administer an injection is not enough to make someone a veterinarian.

The OIE has defined criteria for the official recognition of veterinarians and veterinary para-professionals under the supervision of veterinarians. This provides a real guarantee because it ensures not only the availability of medical interventions but also their consistency with the requirements of the domain. They operate at different levels.

### **Technical level**

Not all activities within the veterinary domain require a qualified veterinarian, but veterinarians are necessary for medical interventions requiring specific technical expertise, such as the prescription of veterinary medicinal products or ante-mortem or post-mortem diagnosis. Veterinary training is also essential for issuing certification based on this expertise.

The security of the entire system may depend on the quality of veterinary medicine, because a flawed diagnosis of a contagious disease, for example, can have serious consequences. It makes sense that veterinary medicine should only be practised by competent personnel. Nevertheless, access (geographic and economic) to veterinary services is also vital, meaning that they may have to be delegated to non-veterinarians in many situations. Such situations, while inevitable, are far from satisfactory because epidemiological information and animal health may suffer. It would therefore seem reasonable, in the longterm, to entrust the practice of veterinary medicine mainly to veterinarians, or at least to people under their supervision.

Epidemiology is a key component of the veterinary domain because it exploits information and knowledge of a chain of events, making it possible to organise the rational prevention and control of animal health incidents. This is a very complex and typically multidisciplinary subject. Veterinarians are key players in the validation of basic medical data and can also assist in the scientific or administrative functions in which they have specific expertise.

While its implementation can, of course, be delegated, animal health inspection is primarily a state responsibility because it is an element of consumer safety. Animal health inspection comprises a multitude of tasks, with control of the animal–food interface playing a vital role, because it governs the initial quality of products entering the processing chain and is a critical epidemiological observation point. At this stage, inspection is based largely on medical knowledge, so it follows that veterinarians should be responsible for it and, at the very least, exercise effective oversight.

International certification is the responsibility of certifying veterinarians under the conditions specified in Chapter 5 of the OIE *Terrestrial Animal Health Code* (18),

in which the role and responsibilities of veterinarians are clearly stated.

Apart from the above areas, which can be considered the sole province of veterinarians because they match the competencies covered by the veterinary degree, veterinarians may of course have expertise in other areas of the veterinary domain. However, this will be on the same footing as other professionals with the necessary qualifications, with whom they are in competition.

## Oversight

While the technical role of veterinarians fits readily into the general scheme of the veterinary domain, their role in the domain's design and management is less obvious, but still essential.

Although this role mainly calls for organisation, regulation and management expertise, none of which is specific to veterinarians, there is much evidence to show that marginalising technical knowledge in the public administration leads to a widening gap between the reality on the ground and the operational and legal framework. It is therefore essential to have veterinary competence at the highest levels of the veterinary administration to ensure relevant and consistent technical choices.

However, technical competence alone is not enough; if it were, it would suffice to resort to seeking independent expert appraisals as and when required. Clearly this is not the case, judging by the outcomes of projects that have been implemented on the basis of these principles. These outcomes show that veterinary competencies should not be called upon merely from time to time but should be a permanent part of the governance of the veterinary domain. They also show that decision-making, which must be multidisciplinary, cannot dispense with input from veterinary experts. Proper organisation and management of the domain can be achieved only by a combination of all the necessary competencies – not only in veterinary medicine, but also in such fields as law, economics, sociology and politics.

Veterinarians must find their place within this multidisciplinary framework. They do not have an automatic right to be part of it, but they have a legitimate role to play because of their competencies and adaptability. This means that we must stop believing that a veterinary degree gives automatic access to high office; the acquisition of further knowledge is vital. Having defined the curriculum for practising veterinarians, we now need to envisage one for official veterinarians. Some countries have had this type of training in place for many years. For example, France established a National School for Veterinary Services

(*École Nationale des Services Vétérinaires*) in 1973, and now Senegal's Inter-State School of Veterinary Science and Medicine (EISMV) in Dakar offers a Master's course for official veterinarians. But there is no doubt that these training courses, which are true specialisations, need to be disseminated more widely.

## The need for veterinarians and protection of their activities

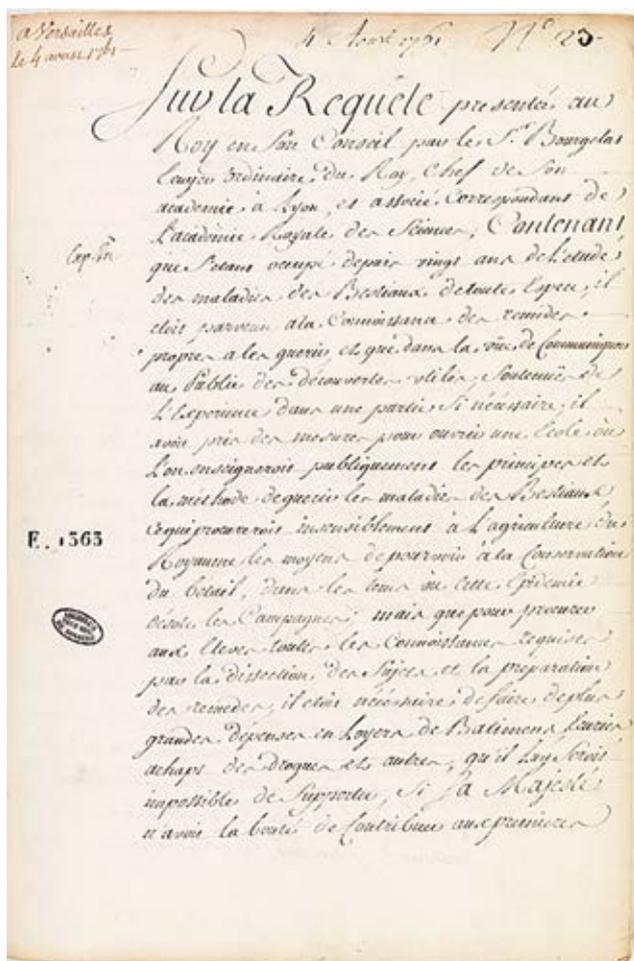
Maintaining the health of animals has always been vital for the success of human societies, so veterinary medicine has been practised since very early times. We find many traces of veterinary interventions in ancient civilisations and scholars have devoted themselves to veterinary science since the beginning of time. Despite this, most procedures were performed by empiricists, that is to say people who had acquired skills through practice but were unable, in most cases, to take an overall or strategic view.

This situation prevailed for a long time and still does, to a large extent. In fact, in many countries it is being heightened by the absence of a legal framework for veterinary para-professionals or the introduction of low-skilled animal health workers.

If we take an individualistic view of veterinary medicine, and if we consider the fact that most laws view animals as things, the choice of service provider (and hence their training) and care contract lies with individual animal owners. However, the involvement of the state is justified because veterinary procedures are not neutral for society, quite the reverse. Moreover, animals are susceptible to epidemics and can act as vectors of zoonoses and individuals are unable to address such serious problems. Collective control measures are always required and this cannot be achieved without trained and coordinated field workers.

It was to meet these two basic needs that the first veterinary school was established (Fig. 3). The aim of the school was to teach the principles and methods of curing animal diseases, in order to gradually provide France's agriculture sector with the means to safeguard cattle in the face of ravaging rinderpest epidemics.

The mere existence of qualified personnel is not enough to resolve the problem if they are not available on the labour market, not employed, or turn away from their profession because they are unable to make a living by practising their skills. This is a problem very aptly illustrated in a letter of 1811 from Jerphanion, Prefect of France's Haute-Marne region, to local mayors. In it he asks them to draw up a list of trained veterinarians to counteract the deluge



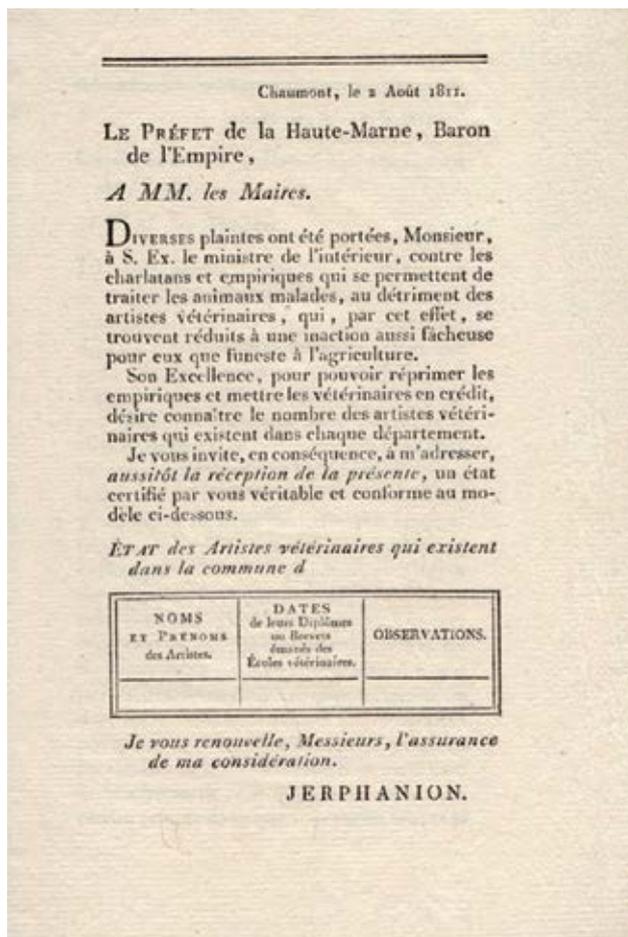
**Fig. 3**  
**Extract from the royal decree of King Louis XV establishing the veterinary school of Lyons (France)**

of charlatans and empiricists who were putting trained veterinarians out of work and ruining agriculture. It shows the explicit link between protecting a profession and the impact on the wider community (Fig. 4).

It is precisely this situation that faces a number of African countries wishing to develop private veterinary practice. The market in such countries is overrun by empiricists working for low pay, making it very difficult for private veterinarians to set up in practice. In response, most private veterinarians turn to selling medicinal products instead, which leads to over-consumption and runs counter to the veterinary public health objective of controlling veterinary drug residues.

The problem is that, with no veterinarians in the field and no organised network, it is very hard to collect enough epidemiological information to take action against collective pathologies.

If we acknowledge the vital role of veterinary activities in veterinary public health and the fact that competition



**Fig. 4**  
**Letter from Prefect Jerphanion of 2 August 1811**

between the different levels of personnel does not meet collective needs, it is essential to find a balance and establish it through legislation.

In France the practice of veterinary medicine gradually became the monopoly of veterinarians, first for contagious diseases (under the law of 21 July 1861 prohibiting anyone without a veterinary degree from practising veterinary medicine to treat contagious animal diseases) and, in 1938, for all veterinary activities.

Although the French model itself is clearly not universal, the author believes that the reasons for which it was developed are the same across the world:

- veterinary medicine must be of a sufficient level to meet the needs of animal owners and society
- for an adequate number of veterinarians to be available to guarantee the desired level, there needs to be a market that allows them to make an independent living from their skills, or else they must be paid by the state

– the practice of veterinary medicine must be organised to meet the needs of veterinary public health, which means it must be regulated.

It is worth noting that not all society's needs are material and some may relate to animal protection or religion.

### Trade-offs

The direct stakeholders and their main interests are:

- livestock owners seeking the best value for money from veterinary services
- owners who have animals with great economic or sentimental value and who are seeking the best care
- private veterinarians, who need to charge prices that reward their intellectual and material investment and assure their social standing
- veterinary para-professionals, who offer animal nursing care at a lower cost than veterinarians
- governments, which must ensure that the national herd produces the necessary resources to ensure food security, safety and economic security while guaranteeing trustworthy services.

As interests differ, trade-offs will depend on the relationship between clients and suppliers on the one hand, and state objectives and strategies on the other.

Allowing free reign to the rule of the market inevitably leads to a separation of professionals into a low-cost majority for everyday tasks and a small minority for highly technical interventions, whose numbers are insufficient to cover the entire country. This was the situation in Europe in the 18th Century (and in many developing countries today) and it eventually led to a commercial vision of veterinary medicine.

While every country must find its own balance based on its economic, social and historic situation, in all cases the level of security will be determined by the competence of veterinarians and their collective ability to take action, which obviously depends on their number.

This makes defining the role of veterinarians a strategic instrument and protecting the profession (rather than individuals) a prerequisite.

Added to that is another necessity: technical independence!

Where veterinarians are obliged to use certain methods or to obey rules that are likely to annoy their clients, competition must not be allowed to undermine their decisions. This

point should not be underestimated because it is a key element of certification.

Despite any criticisms that may arise from positions of principle regarding freedom to practise, or the conduct of some beneficiaries, protection of the veterinary profession, its regulation and the resulting enforcement are necessary and warrant specific legislation.

## Legislation

Article 23-1 of the 1948 Universal Declaration of Human Rights, which has been incorporated into many constitutions, makes freedom to work a fundamental freedom: 'Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment'.

Therefore, any legislation governing the practice of veterinary medicine, which necessarily limits this fundamental freedom, must be based on the benefits for society. This is indeed the case with the veterinary professions, which have three special features:

- their interventions have a direct or indirect impact on public health
- they may exceed the framework of the service contract
- certification engages the responsibility of states.

The need to protect public health is one of the driving forces behind the development of legislation, but another is the need to ensure that transactions are fair and honest, because animal owners are entitled to expect a guarantee of service.

For all these reasons, state regulation of veterinary activities is justified.

Unlike domains where regulation is based on responsibilities and rulings established *a posteriori*, many veterinary procedures must be regulated *a priori* because of their potential impact on veterinary public health, in the knowledge that it is far better to prevent an epizootic in the first place than to track down the source of an existing one!

The advance guarantee of quality is the veterinary degree, and the veterinary statutory body is the guarantor as, unlike technical procedures, clinical diagnosis is difficult to codify because it is a skill rather than a procedure. Legislation should be restricted to defining the framework for intervention, leaving it to the scientific community to develop and update appropriate rules. It suffices to ensure that professionals are properly trained by defining the content and procedures for the recognition of diplomas,

setting continuing training requirements and then ensuring that all professionals apply best practice and discharge their duties.

While it is up to individual states to choose the method for such control, which requires expertise, there is a broad consensus that, where Veterinary Service staffing levels and organisation allow, the most efficient method is to delegate control to a veterinary statutory body. Legislation should therefore provide a specific framework for this body, which is charged with overseeing the profession, and guarantee the quality of veterinary medicine, which is the cornerstone of the 'farm to fork' domain.

These veterinary public health and public order considerations provide justification for a monopoly on the practice of veterinary medicine, with clear advantages for its beneficiaries. In return, veterinarians have to comply with a moral obligation to meet society's expectations by sparing no efforts in all animal health and epidemiological surveillance activities. They must also accept that, while undertaking these activities, they may act only under the authority of the state and under a specific mandate.

Each element of the veterinary domain warrants legislation, ranging from technical standards to operating modes and professional qualifications. While it is impossible to establish universal legislation for veterinarians, there are a number of constants:

- veterinary medicine and the methods for practising it must be defined
- its practice must be reserved for skilled professionals
- veterinarians must have powers of prescription or oversight to guarantee the quality of diagnosis and epidemiological information, as well as the quality of interventions
- the system must be rigorously controlled and readily activated.

All of these elements can now be found in Chapter 3.4.6. of the OIE *Terrestrial Animal Health Code*.

## Conclusions

The important material and cultural links between humans and animals have always engendered an interest in veterinary medicine, which has gradually developed into an independent discipline at the interface between medicine, animal production and the environment (10).

Thanks to advances in knowledge, followed by organised training, veterinarians have proved capable of protecting the safety of livestock and animal foodstuffs, gradually taking their place as the keystone of veterinary public health at the highest level.

Nevertheless, the fact that the protection of veterinarians conflicts with short-term economic realities makes it vital to have an adequate legal framework to guarantee the existence and long-term survival of the veterinary profession.

This requires recognition of the role of veterinarians at different key points in the farm-to-fork continuum, backed by quality standards. Their role is not confined to the execution, oversight or supervision of technical tasks, but also extends to the design and management of the system.

Even though veterinarians have come to play a less visible role in developed countries, where the public is largely unaware of how much work they do to ensure consumer food safety, veterinarians remain a cornerstone of food security in many regions of the world.

The dogma of free competition, implemented without a thought for historical or geographical factors, and in contradiction with the objective of veterinary public health, should not be allowed to prevent developing countries from joining the ranks of developed countries in the near future or to set back the developed countries by 250 years.



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