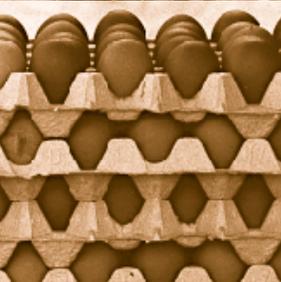




 Federation of  
Veterinarians of Europe

Food safety

The stable to table  
approach





## Introduction

Since the early sixties, the European Union has developed a comprehensive series of measures to ensure that food is safe. These measures include rigorous official veterinary inspections, controls and testing at all levels of the production, processing, distribution and retail chain. These checks also apply to products imported into the European Union from third countries.

Recent and serious food-related problems have however caused substantial damage to the public's confidence in the current approach to the control of food safety.

This lack of confidence in food safety has led to the belief that the current approach to food inspection needs to be modernised and more coherent in order to achieve the highest possible level of health protection. This belief is endorsed and supported by many veterinarians, whether they are involved as practitioners at farm level, as official veterinarians in inspection services or as specialists in public health.

A new approach to food safety must provide reassurance not only from the point of view of the consumer, but also from that of society as a whole. To achieve this, the new approach must be able to integrate public health with animal health and welfare, since animal health and welfare can have a direct effect on public health in general and on the safety of food in particular.

During the last 30 years many socio-economic changes have occurred which have brought about the need for a more integrated food safety approach. Some of these changes are:

- *The patterns of production, processing, sale and consumption of agricultural products have changed.*
- *Housing, husbandry and feeding systems are generally becoming more intensive and industrialised.*
- *A new spectrum of animal diseases, such as BSE, together with zoonotic/foodborne diseases, such as Salmonella and the verotoxic strains of E. coli, have emerged and are gaining greater importance.*
- *International animal trade is expanding and will continue to do so with the enlargement of the EU.*
- *There are social changes such as increasing public awareness, changing life styles and demands for higher standards.*
- *Alterations to social patterns have resulted in convenience foods and pre-prepared meals being more commonly consumed.*
- *Increased exchanges of products of animal origin have resulted on the one hand in cheaper and more varied food for the consumer, but on the other hand, in increasing difficulties to trace products between their place of production and the final consumer.*

The stable to table approach to food safety aims at linking the entire chain of food production from animal feed and animal breeding right up to the moment where food is placed on the table of the consumer.

## The stable to table approach to food safety

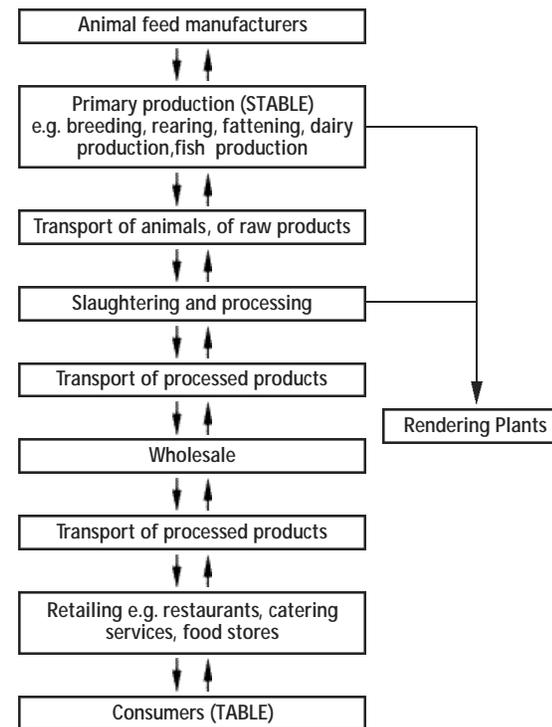
In 1996 the European Commission recognised that *"the biological and chemical agents which cause food poisoning are many and varied but that they almost all have one feature in common: they accompany the animal from the stable to the table. For this reason, any attempt to maintain a high level of protection of consumers without taking account of what is happening throughout the whole production chain is doomed to failure"*.

The stable to table approach to food safety is an holistic approach embracing all elements, which may have an impact on the safety of food, at every level of the food chain from the stable to the table. The phrase is used to encompass the production of all foods of animal origin and can be applied not only to meat but also to milk, eggs, fish and other products from aquaculture, as well as fruits and vegetables.

Applying this approach means that food safety is not solely a matter of inspection at the slaughterhouse or processing plants as has traditionally been the case. On the contrary, this system emphasises the need for interaction between all participants in the entire food chain, from the animal feed manufacturer down to the individual consumer.

Communication throughout the food chain, from the farm to the consumer is a critical element of this approach. However, the communication must be two-way so that pertinent information is going from the farm of origin to official veterinarians at the point of control and back again. This ensures that for instance any findings during the inspection performed at the slaughterhouse are reported to the farm and to the field veterinarian and thus can be addressed at the farm level. Similarly, the results of investigations into the cause of food poisoning incidents must be communicated back down the production process in order that preventative actions can be taken.

The stable to table approach to food safety therefore requires the development of schemes enabling full traceability of food products from the production place to the consumer backed up by effective communication of pertinent information throughout the food-chain.



Although ambitious, the stable to table approach to food safety is the only way to optimise inspection of food of animal origin, in order to ensure that corrective actions are taken and that the highest possible assurance of food safety is delivered to the consumer ■



The stable to table approach can also meet consumers' interests and concerns, not merely from a health point of view but also by taking into account animal welfare, ethical and environmental considerations.



## Food safety Throughout the food chain

The stable to table approach to food safety requires the implementation of specific measures at all levels of the food chain from the primary production down to the individual consumer.

### Primary production

#### Animal feed

Amongst the many measures required by this approach, the full traceability of animal feed at the very start of the chain is a critical one, as exemplified by both the dioxin contamination and the BSE crisis. This means that each batch of animal feed must be identified and that records of the distribution route from the manufacturer to the farm must be maintained. This will make alert and intervention easier when feed contamination has been detected, allowing in particular a rapid identification of farms or animals having received the contaminated feed.

The same should apply to the individual feed ingredients, as contamination may occur well before ingredients are supplied to and mixed by the feed manufacturer.

#### Animal identification

A foolproof system of animal identification is required and this must be harmonised across the EU. This has to be secure, clearly visible, easy to apply and yet any attempt to tamper with the system must be detectable. Also, farms and farmers must be individually registered and identified.

All animals must be entered on the farm register, which must be updated every time an animal or a group of animals is entering or leaving the holding. This information must in addition be made available to a central computerised database to facilitate the monitoring of animal movements.

#### Animal Health

Herd health surveillance schemes must be introduced at farm level. These schemes are intended to improve the health of the herd by focusing on husbandry practices and farm management. They must also include routine animal health visits carried out by a veterinary surgeon contracted by the farmer.

In addition, since many pathogens can be transferred from animals to man by direct contact or through vectors such as food, an effective interaction between herd health and epidemiological surveillance schemes is essential.

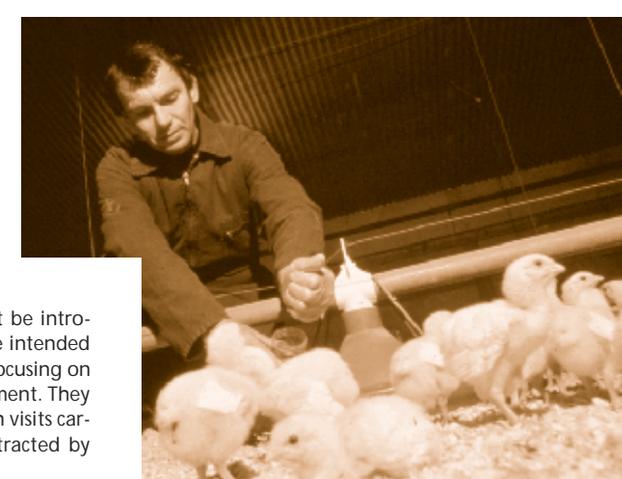
Herd health surveillance schemes must therefore encompass an element of pathogen prevalence monitoring. This should in particular cover zoonoses that may be transferred to man and other animal diseases relevant to improving herd health.

#### Animal welfare

Public health, animal health and animal welfare are interrelated. As an example of this, stressed animals are more likely to develop diseases, which require veterinary treatment. This in turn may increase the presence of residues of veterinary medicinal products in animal produce, thereby potentially affecting public health, even though available surveillance data from Member States suggest that compliance with minimum tolerated residue levels is good.

As a key factor for animal health and food safety, animal welfare must therefore be a component of herd health surveillance programmes. There will therefore be a need for regular routine visits during which veterinary surgeons can monitor welfare and record welfare parameters.

In addition, the labelling of the final product should contain details of the breeding and husbandry methods employed in the keeping of the animals, including their welfare.



**Herd health surveillance schemes must also include routine animal health visits carried out by a veterinary surgeon.**

## Food safety Throughout the food chain

### Animal waste

Again, the recent crises demonstrate that transport, handling and disposal of animal waste are critical elements of the stable to table approach, which must be thoroughly controlled.

### Record keeping and central computerised database

Farmers, veterinary surgeons, technicians and all those involved on the farm must keep records of their activities. Critically, the medical history of the animals must be recorded as such information is important for the protection of public health.

Ideally these records should be gathered in a central computerised database for further reference and the information must also be made available to players further down the chain.

Therefore, whenever an animal is delivered to a slaughterhouse, milk, eggs or farmed fish delivered to a collecting centre, the official veterinarian can immediately retrieve the history of the animal, of the milk or eggs and their farm of origin. The inspection procedures can then be adapted in the light of this data, enabling an optimal allocation of the resources available.

### Evolving role of veterinary surgeons

Over the last 30 years, the focus has moved from the production of animals and animal products to the production of food, often with a specific market or consumer in mind. The focus of veterinary medicine has shifted accordingly from the individual animal, to herd health and since the mid 90s to public health. The role of veterinary surgeons has thus evolved towards preventative medicine, prudent use of medicines, residue control and pharmacovigilance to protect public health as well as ensuring animal health and welfare.

This is reflected by the development of herd health surveillance schemes, which involve veterinary surgeons in several ways. Alongside their traditional role, the role of veterinary surgeons is becoming more geared to providing information and advice on general public health, animal health or animal welfare issues, such as the correct use of medicines, especially in respect of antibiotic usage and withdrawal periods, environmental contaminants or good hygiene practice.

Finally, as external controls by independent bodies are also essential to ensure compliance with the objectives of the stable to table approach, unannounced farm visits by veterinary surgeons employed by such independent bodies are necessary to audit the schemes in place, especially when these schemes include animal health or welfare certification.



**A foolproof system of animal identification is required and this must be harmonised across the EU.**



## Food safety Throughout the food chain

### Transport and movement of animals

#### Animal movement

The movements of animal must be recorded, not only when entering or leaving the farm, but throughout the journey from the holding of origin to the final destination point.

Animal identification must be coupled with an electronic system and a central computerised database to trace the origin and movement of animals, thus allowing easy and rapid tracing if necessary.

#### Animal health and welfare

Monitoring and enforcement of animal health and welfare during transport are important to public health. Movement of animals causes stress and stressed animals are more likely to cause contamination of the meat. However, rather than transporting live animals over long distances, trade in carcasses is preferable and should be encouraged.

When transport is necessary, loading densities and resting periods must be observed. Also, the personnel accompanying the animals should have received minimum training to care for the welfare of the animals.

Furthermore, hauliers involved in the transport of animals must be registered, as well as their vehicles, and must meet the agreed standards for the transport of animals.

### From processing to retail sale

The stable to table approach goes along with the introduction of modern inspection procedures to control the quality and the safety of our food. The Hazard Analysis Critical Control Points (HACCP) is such a procedure. It is a preventative approach to food safety control that can be applied from the point of slaughter or collection to the point of sale to the consumer. It is intended to achieve the highest level of consumer protection.

#### HACCP and Codes of Good Practice

The procedure involves a logical series of steps through which all of the potential hazards to food safety are identified and prioritised. Significant hazards can then be controlled by identifying those points in the process where control is critical. This allows monitoring and control procedures to be concentrated at these specific points.

This procedure can therefore be applied to food production and to food processing in order to enhance the safety of food, to reduce food safety hazards and to allocate the resources in the best possible way by focusing on the critical points of the food chain.

Under the HACCP procedure, food operators must identify any and all food safety hazards, which could reasonably be expected to occur in their processes and products. For each specified hazard, the point at which the hazard can be controlled, reduced or eliminated must be identified. Next, a determination must be made to control the hazard, what limits are placed on the control, how plant personnel will monitor those limits, and what the plant personnel will do if there is a mistake or a problem. HACCP plans are all very specific to the type of product and to the production facilities.



The stable to table approach goes along with the introduction of modern inspection procedures to control the quality and the safety of our food.



## Food safety Throughout the food chain

The HACCP system encourages the principle of self-checks and clarifies responsibility.

It is however recognised that HACCP procedures might be difficult to implement in small establishments. To assist, Codes of Good Practice could be developed by sector of activity. Veterinarians could have a key role in ensuring that these Codes are closely followed by carrying out, for example, regular routine audit and sampling.

Like slaughterhouses and food processing facilities, food wholesalers, distributors, retailers, as well as restaurants and catering businesses, must also follow Codes of Good Practice and HACCP procedures.

This is of particular importance for food retail shops as experience indicates that cross-contamination often occurs there. Measures must therefore also be taken at this level to guarantee that the strictest hygiene rules are observed and that food is not contaminated by inappropriate action. This will involve licensing after inspection by the competent authorities and the proper training of staff.

### Meat inspection

Meat inspection has two components: inspection of the live animals before slaughter (*ante mortem* inspection) and inspection of the carcass after slaughter (*post mortem* inspection).

The involvement of practising veterinary surgeons attending the animals at the farm of origin in the inspection process can deliver an increased value to the *ante mortem* inspection. These veterinarians have a better knowledge of the animals and of their farm than any official veterinarian who, by the very nature of the *ante mortem* inspection, will be called only once to examine the animals.

The relevant information collected at farm level must in addition be transferred to official veterinarians at the point of slaughter, who can then decide on how to adapt the *post mortem* inspection in the light of the *ante mortem* inspection findings and of the history of the farm of origin.

### Traceability

Once the food has been processed, each single unit has to be identified by a lot or batch number so that each product can be traced back to its origin.

Also, all food-operators must be registered and individually identified to allow full traceability.

### Self checks and official controls

Spot checks, uniform with the HACCP principles and guided by the data supplied by the central computerised database, must be established in all places where food is processed, stored or sold. These checks, which may be performed by the food-operators themselves, will, for example, focus on detection of cross contamination during storage and on the correctness of labelling and storage.

Although food operators should bear the primary and entire responsibility for the safety of products, which they place on the market, the guaranteeing of food safety and public health is ultimately a public task.

Checks and inspection of the final product must therefore remain the responsibility of the competent authorities, even though the food operator may have HACCP and self-checks procedures in place. The competent authorities are also responsible for putting the correct legislation into effect and for ensuring that this legislation is faithfully implemented.



Restaurants and catering businesses, must also follow Codes of Good Practice and HACCP procedures.



## Food safety Throughout the food chain

### Consumers

#### Consumer responsibility

The stable to table approach to food safety is intended to deliver the highest level of consumer protection. However, the individual consumer is a key component of this approach. Whatever the advantage of this approach, consumers are ultimately responsible for correct storage, handling and cooking of food. The safest food can become unsafe if stored, handled or cooked in an inappropriate fashion.

#### Consumer education

Consumer education is therefore necessary in order to communicate the basic principles of food storage and to reinforce consumer responsibility.

#### Consumer information and choice

The stable to table approach can also meet consumers' interests and concerns, not merely from a health point of view but also by taking into account animal welfare, ethical and environmental considerations.

As a result of the stable to table approach, consumers could expect to be provided with essential and accurate information on food constituents and the method of production. This information, when presented in a concise and clear way, will allow consumers to make informed choices. Carefully considered coherent labelling has therefore an important role to play ■



## Conclusions

By integrating the feed manufacturing, production, transport, processing and distribution stages, the stable to table approach to food safety aims to increase the quality and safety of food in order to achieve the highest possible level of health protection.

Wholesome safe food of animal origin can however only be produced from healthy animals kept in hygienic conditions and in husbandry systems that cause them minimal stress, combined with the responsible use of veterinary medicinal products.

The stable to table approach to food safety can therefore only be successful if the health and welfare of animals are fully integrated into the approach.

The veterinary profession has a central role to play in ensuring that such a system exists. Veterinarians are present at every link in the chain and have the knowledge and expertise to audit the standards of animal health, animal welfare and public health from stable to table.

## FVE MEMBER ORGANISATIONS

Austria	Bundeskammer der Tierärzte Österreichs
Belgium	Union Professionnelle Vétérinaire Vlaamse Dierenartsen Vereniging
Croatia	Hrvatska Veterinarska Komora Societas Veterinaria Croatica
Cyprus	Pancyprian Veterinary Association
Czech Republic	Komora veterinárních lékarů České Republiky
Denmark	Den Danske Dyrlægeforening
Estonia	Eesti Loomaarstide Ühing
Finland	Suomen Eläinlääkäriilitto
France	Ordre National des Vétérinaires Syndicat National des Vétérinaires d'Exercice Libéral
FYROM	Makedonska Veterinarna Komora
Germany	Bundestierärztekammer
Greece	Hellenic Veterinary Association
Hungary	Magyar Állatorvosi Kamara
Iceland	Dýralæknafélag Íslands
Ireland	Veterinary Ireland Irish Veterinary Council
Italy	Federazione Nazionale degli Ordini Dei Veterinari Italiani
Latvia	Latvijas Veterinārstu biedrība
Lithuania	Lietuvos Veterinarijos Gydytoju Asociacija
Luxembourg	Association des Médecins Vétérinaires du Grand-Duché de Luxembourg
Malta	Malta Veterinary Association
Netherlands	Koninklijke Nederlandse Maatschappij voor Diergeneeskunde
Norway	Den Norske Veterinærforening
Poland	Polska Izba Lekarzy Weterynarii
Portugal	Ordem dos Medicos Veterinarios Sindicato Nacional dos Medicos Veterinarios
Romania	Asociația Generală a Medicilor Veterinari din România
Slovak Republic	Komora veterinárnych lekárov Slovenskej Republiky
Slovenia	Veterinarska Zbornica Slovenije
Spain	Consejo General de Colegios Veterinarios de España
Sweden	Sveriges Veterinärförbund
Switzerland	Gesellschaft Schweizerischer Tierärzte/ Société des Vétérinaires Suisses
UK	British Veterinary Association Royal College of Veterinary Surgeons
Yugoslavia	Veterinary Chamber of Serbia & Montenegro
Sections	European Association of State Veterinary Officers (EASVO) Federation of European Veterinarians in Industry and Research (FEVIR) Union of European Veterinary Hygienists (UEVH) Union Européenne des Vétérinaires Praticiens (UEVP)



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