

The present and future organisation of Veterinary Services in Asia: the examples of the Republic of Korea and Japan

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Summary

The Veterinary Services of the Republic of Korea and Japan are reviewed and summarised. To cope with ever-increasing demands on Veterinary Services, both countries have made continued efforts to expand the services, which currently only have a limited number of government personnel.

To overcome some of the problems associated with international trade, e.g. outbreaks of foot and mouth disease and classical swine fever (hog cholera), the authorities of the Republic of Korea are considering strengthening quarantine services by combining the National Veterinary Research and Quarantine Service and the National Plant Quarantine Service of the Ministry of Agriculture and Forestry (MAF).

In the field of veterinary public health services, the Republic of Korea and Japan have different organisational structures. All Veterinary Services, including veterinary public health, are kept within the MAF in the Republic of Korea, whereas in Japan, the Ministry of Agriculture, Forestry and Fisheries (MAFF) deals with general animal production and health services and the Ministry of Health, Labour and Welfare (MHLW) deals with the safety of animal products, food poisoning and the prevention/control of zoonoses, such as rabies and Q fever.

In Japan, after the occurrence of bovine spongiform encephalopathy in 2001, the authorities undertook a thorough review of the Veterinary Services, focusing particularly on food safety. A reorganisation of the administrative structure was proposed, and will be completed by the end of 2003. Subject to the approval of the Diet (House of Councillors), an independent 'Food Safety Commission' will be created within the cabinet office which will undertake risk analyses related to foods, and risk management will be carried out by the relevant ministry, i.e. the MAFF or the MHLW. The Animal Health Division of the MAFF will also be moved from the Livestock Industry Department to a new 'Consumer Safety Department' of the MAFF, where additional responsibilities in fish health control and feed safety control will be assumed.

Keywords

Food safety – Hazard analysis and critical control point – Japan – Republic of Korea – Quarantine service – Veterinary Service – Zoonosis.

Veterinary Services in the Republic of Korea

National Veterinary Services

The Ministry of Agriculture and Forestry (MAF) is the central veterinary body responsible for Veterinary Services in the Republic of Korea and is responsible for the delivery of animal health services on behalf of the Government.

Each local government has a Veterinary Service responsible for the control and eradication of diseases within the local area. These Veterinary Services include provincial animal health laboratories.

The MAF controls food products originating from livestock, such as meat, milk, and meat and milk products, other food products are administered by the Korean Food and Drug Administration (KFDA).

Ministry of Agriculture and Forestry

The Animal Health Division (AHD) of the MAF prevents the entry of, and, where necessary, eradicates epizootic diseases. The main responsibilities of this Division include the following:

- a) the control and eradication of enzootic diseases
- b) the export/import inspection of animals and livestock products
- c) the promotion and enforcement of acceptable animal welfare standards
- d) the control of zoonotic diseases
- e) the guaranteed safety and efficacy of veterinary medicines.

The AHD Director is also the Chief Veterinary Officer. As such, he represents the Veterinary Directorates of the Republic of Korea and is the permanent Delegate of Korea to the OIE (World organisation for animal health) (Fig. 1).

After recent reorganisation, the Livestock Bureau now includes the new administrative function of consumer protection. The MAF regulates the safety of livestock products from the farm production site to the table of the consumer. The Livestock Product Sanitation Division (LPSD) performs veterinary supervision of hygiene and meat inspection at slaughterhouses, milk and meat processing plants and butcher shops. This Division is also responsible for veterinary control over livestock markets and grading services regarding animal feeds and animal products.

However, the maximum residue limit (MRL) for meat products is established by the KFDA, in consultation with the MAF.

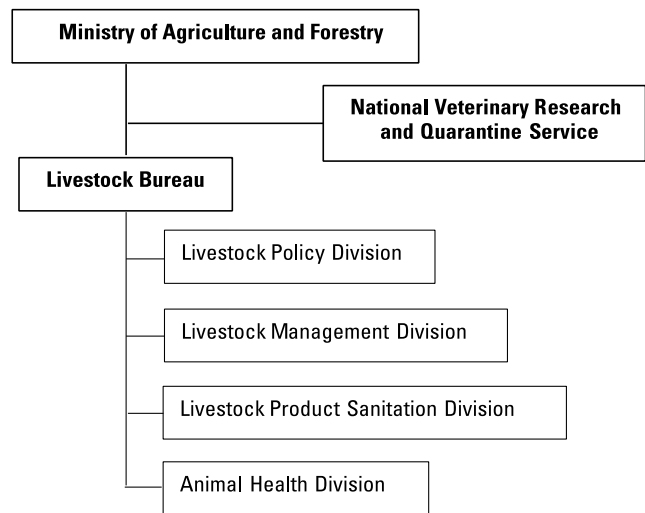


Fig. 1
Organisational structure of the Ministry of Agriculture and Forestry in the Republic of Korea

National Veterinary Research and Quarantine Service

The National Veterinary Research and Quarantine Service (NVRQS) was created as a new executive veterinary agency on 1 August 1998. The Service combined the National Animal Quarantine Service (NAQS), responsible for export and import inspection, and the National Veterinary Research Institute (NVRI), responsible for veterinary research. The new agency also has responsibility for disease control authorities.

The NVRQS headquarters are composed of three departments (the Animal Disease Control Department, the Livestock Products Safety and Inspection Department and the Animal Disease Research Department) and sixteen divisions. There are also regional quarantine services in Seoul, Incheon, Busan, Gunsan and Jeju Island (Fig. 2).

The Animal Disease Control Department controls major livestock diseases, such as the recent outbreak of foot and mouth disease (FMD) and classical swine fever (CSF) (hog cholera). The principal responsibilities of the department include the following:

- surveillance of major animal diseases including FMD, bovine spongiform encephalopathy (BSE), CSF, Aujeszky's disease and pullorum disease
- implementation of disease eradication programmes such as CSF
- analysis of major epidemic outbreaks
- managing diagnosis and monitoring programmes, in co-operation with local animal health institutes.

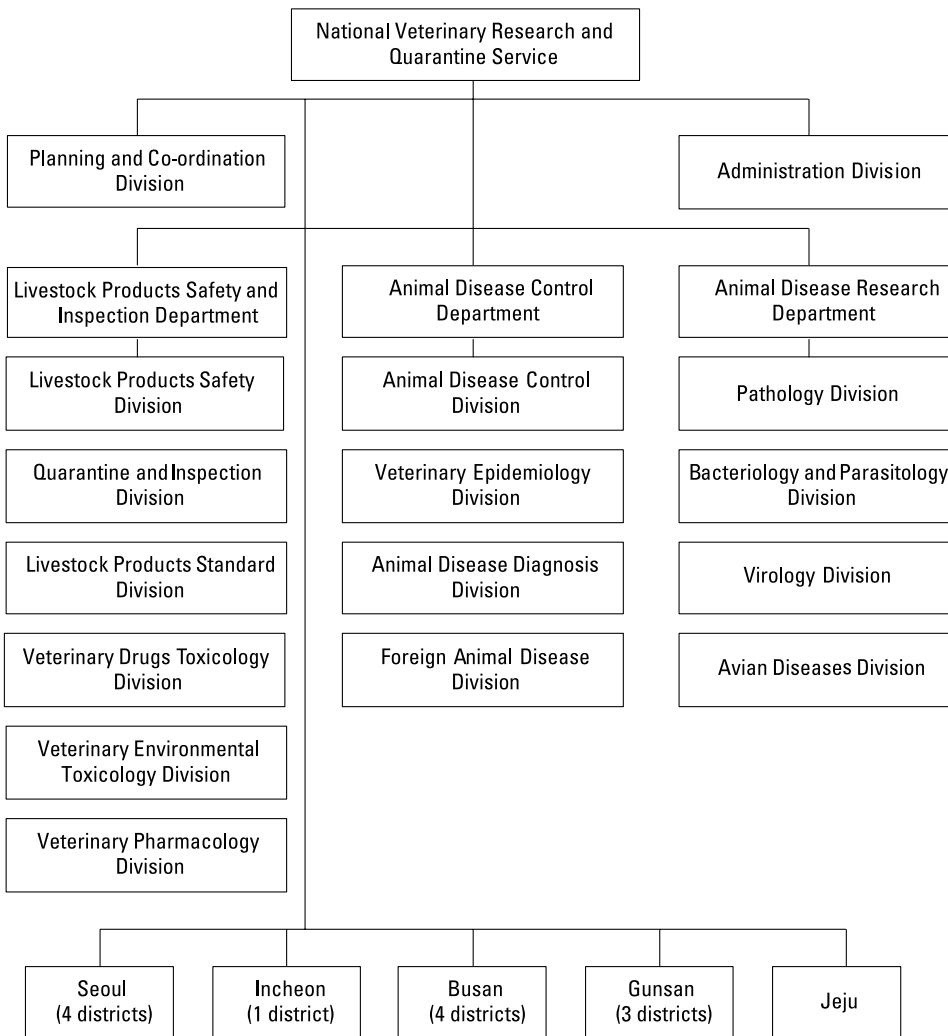


Fig. 2
Organisational structure of the National Veterinary Research and Quarantine Services in the Republic of Korea

The Livestock Products Safety and Inspection Department is responsible for the development of hazard analysis and critical control point (HACCP) systems in slaughterhouses and processing plants. This includes researching and providing training on HACCP systems, designating farms for the application of HACCP systems, inspecting exports/imports (including conducting risk assessments of imported animals and animal products), authorising competent establishments to export and/or import meat, enforcing standards for livestock products, performing residue monitoring and controlling veterinary drugs and biological products.

The Animal Disease Research Department conducts and promotes research into the control and prevention of animal diseases and the enhancement of food safety. This includes the development of new diagnostic methods, the development of new vaccines and delivery systems, research on food safety,

toxicological evaluation of hazardous substances, and research on genomics and proteomics. The research results have a wide range of applications, e.g. policy proposals, farms, patents and standard diagnosis.

Administrative work, such as budgeting and staffing, is handled by separate divisions (the Administration Division and the Planning and Co-ordination Division).

Regional governments

Livestock divisions are responsible for animal health and hygiene in the production of livestock products. To prevent and eradicate major diseases, livestock divisions oversee vaccination programmes, disease diagnosis, slaughtering/culling of animals and control of parasites. To control the hygiene of livestock products, livestock divisions issue licences to slaughterhouses,

milk collection centres and cutting plants, and perform inspections on a regular basis.

There are currently 16 regional governments comprising seven metropolitan city governments and nine provincial governments. Within the metropolitan cities there are also 232 local governments, including 74 *si* (city) governments, 89 *gun* (county) governments, and 69 *gu* (autonomous district) governments.

The regional governments are currently supported by forty-four provincial animal health laboratories. They provide veterinary diagnosis and disease surveillance activities to regional governments and oversee anti- and post-mortem inspections of livestock and carcasses (at 115 slaughterhouses) and raw milk and livestock products. They also co-ordinate emergency disease control activities, such as those implemented during FMD outbreaks.

Local governments

Amongst other duties, the livestock directorate is also responsible for animal vaccination and the operation of a disease reporting hotline. In the event of a confirmed outbreak of disease, the Deputy Mayor (or County Governor) co-ordinates the emergency disease control activity, including movement control and stamping-out. Local governments oversee hygiene at butcher shops and request laboratory tests for livestock products.

There are 692 accredited veterinarians working for local governments, all of whom are private veterinary practitioners. They are involved in disease control under the supervision of the veterinary officer.

Private veterinary organisations

The Livestock Health Control Association, with the aid of the livestock industry and farmers, oversees the nation-wide control scheme for CSF, including the mandatory vaccination and slaughter policy. The association has been legally recognised as the Animal Disease Control Organization (ADCO) through the revision of the Prevention of Livestock Epidemics Act (7).

The ADCO is expected to expand its role to include assisting the veterinary supervision of hygiene, meat inspection and disease control programmes.

Livestock producer associations, such as the National Agricultural Co-operatives Federation, the Korean Swine Association, the Korean Poultry Association and the Korean Native Cattle Association have also established Joint Disease Control Units in each region, which conduct autonomous disease control activities, such as cleansing and disinfection.

Future developments in the organisation of Veterinary Services

There are increasing demands for the prevention and control of diseases such as FMD and CSF. Furthermore, consumers are becoming more and more interested and demanding in regard to the safety of livestock products. This means a heavier workload for the Veterinary Services. However, current veterinary manpower is inadequate to cope and the recruitment of additional workers is difficult in the light of the continued downsizing of the Government.

To ease the situation, it has been proposed to the authority concerned that those public service veterinarians who assist disease control and livestock product inspection in the field be exempt from military service.

It has also been proposed that the Veterinary Services be expanded in the near future so that they can continue to ensure the safety of livestock products and thereby continue to protect consumers.

Animal welfare work has recently been transferred from the Livestock Production Directorate to the Animal Health Division.

The NVRQS authorises the use of veterinary pharmaceutical products as shown in Figure 2. Animal feed safety has been strengthened by the recent transfer of the Services to the Livestock Product Sanitation Division.

The National Assembly is now raising the issue of combining the National Veterinary Research and Quarantine Service and the National Plant Quarantine Service so as to facilitate effective disease control activities.

Veterinary Services in Japan

Activities undertaken by veterinarians

The animal industry in Japan now accounts for approximately 30% of gross agricultural production. Small animals and pet industries have also rapidly expanded in recent years. On the other hand, consumers are demanding a higher level of food safety in the light of the increased incidence of contaminated foods of both domestic and external origins.

A law passed in 1949 specified that veterinarians in Japan should possess a license issued by the Minister of Agriculture and Forestry (1). In 1983, veterinary education was extended from four to six years at 16 veterinary colleges in Japan, in order to fulfil increased educational requirements.

According to the 2000 statistics, there are 26,627 veterinarians working in jobs related to animal health and public health; this

includes 686 civil servants and 7,352 veterinarians who are employed by the prefectural and municipal governments.

In addition, there are 5,582 veterinarians working with private companies and industries, and 11,295 veterinarians who work at private animal clinics.

These veterinarians are engaged in activities in the following fields:

a) Agriculture sector (Ministry of Agriculture, Forestry and Fisheries: MAFF)

- livestock production and health control
- national and international quarantine systems
- animal disease surveillance and monitoring
- control of veterinary drugs and biological products
- control of aquatic animal diseases
- research and diagnosis of animal diseases.

b) Public health sector (Ministry of Health, Labour and Welfare: MHLW)

- slaughterhouse operation and meat hygiene
- zoonoses control and research (rabies, etc.)
- food safety (safety inspection and guidance).

c) Biomedical fields (MAFF/MHLW)

- development of biological products for animal/human use
- safety control of drugs for animal/human use
- control of laboratory animals.

d) Small animal clinics (MAFF)

- treatment of dogs, cats and pets, including small birds.

e) Wildlife/zoo animal health (Ministry of the Environment)

- protection of wildlife
- breeding of rare animals
- health care of zoo animals.

f) Animal welfare (Ministry of the Environment)

- promotion of animal welfare
- consultation on the rearing of companion animals.

g) International affairs (Japanese International Cooperation Agency)

- international technical cooperation on animal health
- international technical exchanges.

Ministries involved in Veterinary Services

Each prefectural/municipal government has a Veterinary Service that is responsible for the control of animal diseases and zoonoses within its boundaries, and for mobilising its staff and facilities, such as animal health centres and meat inspection centres. There are, however, three Ministries that are involved in the work of Veterinary Services at the national level, namely, the MAFF, the MHLW and the Ministry of the Environment.

The main tasks of Veterinary Services in Japan lie with the Animal Health Division of the MAFF, and the Director of the Division is designated as the permanent Delegate to the OIE. The Division is responsible for the delivery of services, such as domestic disease control, animal health inspection (quarantine) and the control of veterinary drugs and biological products.

The MHLW is involved in those areas of Veterinary Services which relate to public health, i.e. meat inspection, control of certain zoonoses (e.g. rabies and Q fever) and food poisoning (Table I).

Table I
Distribution of activities between two ministries in Japan

Activities	Ministry of Agriculture, Forestry and Fisheries	Ministry of Health, Labour and Welfare
Animal health	Infectious diseases of animals (information, leadership in disease control)	
Feeds, animal medicines, fertilisers, chemicals	Control of these products in respect of their quality, safety, methods of application, etc.	The Minister can express his opinion on their use, etc. from the public health viewpoint
Quarantine	Animal quarantine (Veterinary Services) Plant quarantine (Plant Health Services)	Imported foodstuffs (testing for contaminants, etc.)
Slaughterhouses		Setting standards for facilities and for hygienic measures (operated by prefectural governments)
Meat markets	Control of markets	
Food safety standards	Setting quality standards, inspection, testing, approval	Setting standards for foods and additives from the public health viewpoint
Labelling	Setting standards for labelling (the place of origin and materials used), inspection, guidance	Setting standards for labelling from the public health viewpoint, inspection, guidance
Food promotion	Promotion of food industries (improvement of production, distribution and consumption)	

The Ministry of the Environment (Bureau of Natural Environment) is responsible for animal welfare and the protection of wildlife and zoo animals.

The responsibilities of the MAFF and the MHLW will now be examined in more detail.

Ministry of Agriculture, Forestry and Fisheries

The Bureau of Livestock Industry of the MAFF is currently the main administrative body responsible for planning and executing programmes for both animal production and health.

Animal health programmes are dealt with by the Animal Health Division, covering the areas shown in Figure 3. In addition, the Division is responsible for collecting and collating animal disease information and also organises examinations for veterinary qualifications.

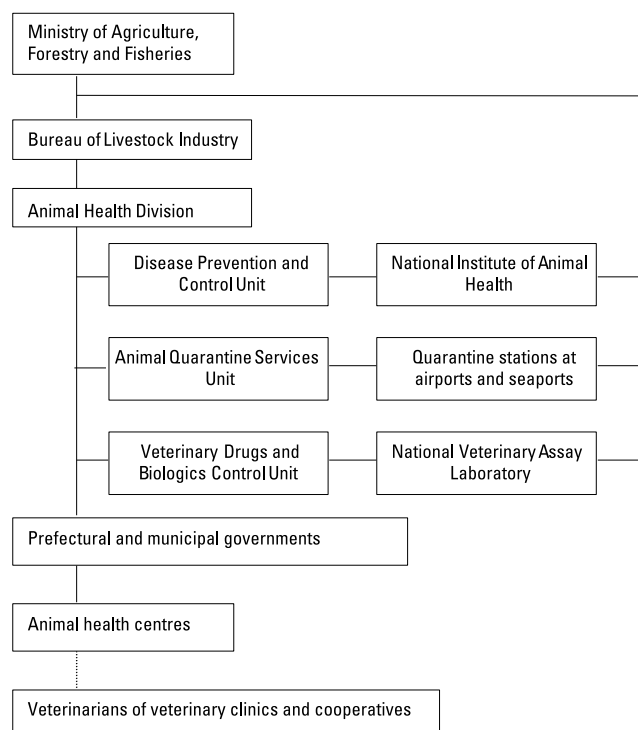


Fig. 3
Organisational structure of the Veterinary Services of the Ministry of Agriculture, Forestry and Fisheries in Japan

In view of the recent spate of complicated diseases associated with large-scale animal production systems, new concepts are required to control or prevent mass production diseases. Furthermore, to improve professional knowledge and to maintain the required number of veterinary professionals, continuous training of senior veterinarians should be provided.

Veterinary Services for small animals are also changing rapidly due to the increase in the numbers of animals and animal species. Much new technology has been developed in this area but in order to benefit from this situation, veterinary professionals must receive further training.

Demands for the expansion of the international animal quarantine systems in Japan, both at airports and seaports, are also increasing due to the ever-increasing trade in companion animals, pets, fish and foods of animal origin.

It is also anticipated that the Animal Health Division will be involved in the food safety control of animal products, including fish, in the near future.

Ministry of Health, Labour and Welfare

On 6 January 2001, the Ministry of Health and Welfare and the Ministry of Labour merged into one ministry, the MHLW.

The Infectious Disease Control Division in the Health Service Bureau of the MHLW has a unit devoted to zoonoses which works closely with the Animal Health Division of the MAFF to prevent or control diseases such as rabies, West Nile virus, chlamydiosis and Q fever.

The administration of food safety is now under the jurisdiction of the Department of Food Safety in the Pharmaceutical and Food Safety Bureau of the MHLW. The entire organisation of the Ministry is available at the MHLW web site (5).

The Department of Food Safety consists of the following divisions and offices:

- Policy Planning Division (general co-ordination of responsibilities under the jurisdiction of the Department of Food Safety)
- Office of Health Policy on Newly Developed Food (labelling of specified uses, nutrition labelling standards, foods with health claims, dietary supplements)
- Office of Port Health Administration (quarantine, inspection of imported food)
- International Planning Co-ordinator (general co-ordination of international affairs under the jurisdiction of the Department)
- Standards Division (all specifications/standards: food, additives, pesticide residues, animal drug residues, food containers)
- Inspection and Safety Division (food inspection, health risk management, such as measures for food poisoning, safety measures for poultry and livestock meat, HACCP, good

laboratory practice, safety assessment of genetically modified foods, measures for environmental contaminants, sanitary control of rendering plants).

The work of the Department of Food Safety is governed by the Food Sanitation Law. This covers various responsibilities, including the following:

- establishment of standards and specifications for food, additives, apparatus, and packaging
- inspection to see whether these established standards are met
- hygiene management of the manufacture and sale of food.

The inspection of meat and poultry meat are governed by the Abattoir Law and the Poultry Slaughtering Business Control and Poultry Inspection Law (2). Other relevant laws include the Law on Temporary Measures for Enhancing the Control Method of the Food Production Process (6) and the Nutrition Improvement Law (3).

Prefectural and municipal governments have an important role to play in these sectors by conducting inspections and by providing advice to food-related businesses. These governments also grant licenses to businesses which operate within their jurisdiction, and revoke those licenses if the businesses violate the law. These activities are executed by the health centres under their jurisdiction.

Imported foods are inspected by thirty-one quarantine stations located across Japan. These stations are controlled by central government (Fig. 4).

The Department of Food Safety is also responsible for providing information to consumers and businesses and for international co-operation in studies and research.

The future of Veterinary Services in Japan

A special committee was appointed to evaluate the government measures taken and to propose new counter-measures. The committee recommended that there should be less emphasis given to the productivity of animals and that more attention should be given to the safety of foods by introducing risk analysis processes in food safety administration. The committee further recommended that an independent government commission, to be called the 'Food Safety Commission' be formed within the Cabinet Office to perform the following tasks:

- to evaluate risks based on technical, scientific and objective viewpoints and to recommend that the Ministries concerned, such as the MAFF and the MHLW, perform risk management
- to monitor the risk control measures taken by the respective ministries
- to respond to emergencies created by contaminated foods
- to act as a communication centre for information related to food safety.

In the event that this new Commission is formed in the Cabinet Office later in 2003, a new Consumer Safety Department will be created within the MAFF, and the Animal Health Division will be moved from the Livestock Industry Department to the new Department and will be called the 'Hygiene Control Division'. This new Division will cover not only animal and fish health but also the safety of feeds. However, all these proposed changes are subject to the approval of the Diet in 2003.

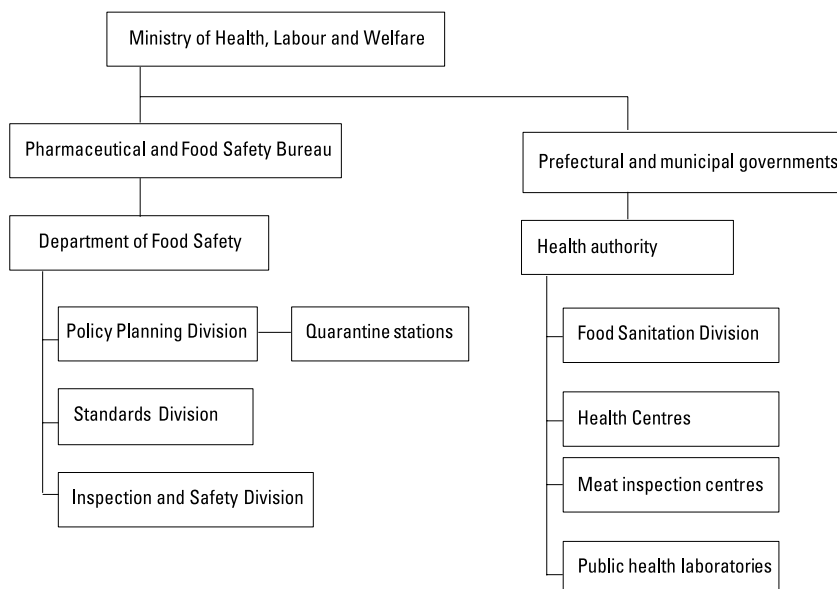


Fig. 4
Organisational structure of the Ministry of Health, Labour and Welfare in Japan

Le mode d'organisation actuel et la restructuration des Services vétérinaires en Asie : les exemples de la République de Corée et du Japon

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Résumé

Les auteurs passent sommairement en revue les Services vétérinaires de la République de Corée et du Japon. Ces deux pays n'ont cessé de déployer des efforts pour développer leurs Services, qui souffrent actuellement d'un manque de personnel, et leur permettre de répondre au nombre croissant de demandes qui leur sont adressées.

Soucieuses de maîtriser certains des problèmes engendrés par les échanges internationaux, tels que la fièvre aphteuse et la peste porcine classique, les autorités coréennes envisagent de renforcer leurs services de quarantaine en fusionnant le Service national de quarantaine et de recherche vétérinaire et le Service national d'inspection phytosanitaire du Ministère de l'agriculture et des forêts (MAF).

L'organisation des services de santé publique vétérinaire s'articule différemment en République de Corée et au Japon : en République de Corée, tous les Services vétérinaires, y compris la santé publique vétérinaire relèvent du MAF ; au Japon, la production animale et les services sanitaires sont du ressort du Ministère de l'agriculture, des forêts et des pêcheries (MAFF), alors que la sécurité sanitaire des produits d'origine animale, les toxi-infections alimentaires et la prévention et le contrôle des zoonoses (rage et fièvre Q, par exemple) sont de la compétence du Ministère de la santé, de l'emploi et de la protection sociale (MHLW).

Après l'apparition de cas d'encéphalopathie spongiforme bovine au Japon en 2001, les autorités ont entrepris un examen approfondi de leurs Services vétérinaires, notamment sur le plan de la sécurité sanitaire des aliments, qui a conduit à une proposition de réorganisation administrative qui sera achevée d'ici la fin 2003. Sous réserve d'une approbation par la Diète (Chambre des conseillers), une commission indépendante pour la sécurité sanitaire des aliments sera créée au sein du cabinet et chargée de l'analyse du risque alimentaire ; la gestion du risque sera assurée par le ministère compétent, c'est-à-dire le MAFF ou le MHLW. Par ailleurs, le département de santé animale du MAFF sera déplacé de la Direction de l'élevage industriel vers une nouvelle « Direction de la sécurité des consommateurs » du MAFF, où il assumera des responsabilités supplémentaires en matière de contrôle de la santé des poissons et de l'innocuité des aliments pour animaux.

Mots-clés

Analyse des risques et maîtrise des points critiques – Japon – République de Corée – Sécurité sanitaire des aliments – Service de quarantaine – Service vétérinaire – Zoonose.



Organización actual y futura de los Servicios Veterinarios en Asia: los ejemplos de la República de Corea y Japón

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Resumen

Los autores hacen un examen y un resumen de los Servicios Veterinarios en la República de Corea y Japón. Para hacer frente a la demanda en continuo aumento de los Servicios Veterinarios, ambos países han desplegado esfuerzos constantes con miras a desarrollar estos Servicios, que actualmente solo disponen de un número limitado de personal gubernamental.

Para superar algunos de los problemas asociados al comercio internacional, como por ejemplo los focos de fiebre aftosa y de peste porcina clásica, las Autoridades de la República de Corea estudian reforzar los servicios de cuarentena combinando el Servicio Nacional de Cuarentena e Investigación Veterinaria y el Servicio Nacional de Cuarentena Vegetal del Ministerio de Agricultura y Forestal (MAF).

En el campo de los servicios de salud pública veterinaria, la República de Corea y el Japón poseen distintas estructuras organizativas. En la República de Corea, todos los Servicios Veterinarios, incluida la salud pública veterinaria, se mantienen dentro del Ministerio de Agricultura; mientras que en el Japón, el Ministerio de Agricultura, Forestal y Pesca (MAFF) se encarga de los servicios generales de producción y sanidad animal, y el Ministerio de Salud, Trabajo y Asuntos Sociales (MHLW), de la seguridad de los productos de origen animal, la intoxicación alimentaria y la prevención y control de zoonosis, tales como la rabia y la fiebre Q.

Tras el incidente de encefalopatía espongiforme bovina ocurrido en Japón en 2001, las Autoridades emprendieron una revisión exhaustiva de los Servicios Veterinarios, centrándose en particular en la seguridad de los alimentos. Se propuso entonces una reorganización de la estructura administrativa, que se completará a finales de 2003. Con sujeción a la aprobación de la Dieta (Cámara de Consejeros), en la oficina ministerial se creará una "Comisión de seguridad sanitaria de los alimentos" que efectuará los análisis de riesgos relativos a los alimentos; la gestión de riesgos estará a cargo del ministerio pertinente, es decir, de Agricultura o de Salud. Además, la División de Sanidad Animal del Ministerio de Agricultura se trasladará del Departamento de Industria Pecuaria a un nuevo "Departamento de Seguridad del Consumidor", donde asumirá responsabilidades adicionales en materia de control sanitario de los peces y de control de seguridad de los alimentos animales.

Palabras clave

Análisis de riesgos y control de puntos críticos – Japón – República de Corea – Seguridad sanitaria de los alimentos – Servicio de Cuarentena – Servicio Veterinario – Zoonosis.



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