

# **Outline of Measures against Infectious Diseases in Domestic Animals**

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## **I Basic Framework of Measures against Infectious diseases in domestic animals**

### **1 Situation Surrounding Quarantine**

Soaring business in the Japanese livestock industry in recent years has seen an increase in the distribution of livestock and products over an ever-wider area. Accordingly, once a disease infects animals, it will proliferate rapidly and over a wide area and may cause vast damage. Amid enhanced trade liberalization and ever-increasing distribution of foreign livestock and products, the risk of invasion from transboundary animal diseases such as foot-and-mouth disease increases correspondingly.

Furthermore, (re-emerging infectious) diseases, which had long been dormant, including porcine epidemic diarrhea, have emerged and become problematic, as well as salmonellosis and other infections of animal origin, which are infectious to humans.

Transmissible Spongiform Encephalopathy (TSE) was first confirmed in Britain in 1986, whereupon it spread to European countries and Japan confirmed its outbreak in 2001. Confusion was rife in the meat industry, including livestock farmers, and the fresh outbreak of a new (and infectious) disease is also possible in future.

In response and from a risk management perspective, the important thing is to build a proactive quarantine system and develop a quarantine promotion system to initiate more effective and efficient quarantine measures. This Outline shows the direction in which basic quarantine measures against monitored infectious diseases are being promoted in the Act on Domestic Animal Infectious Diseases control, with such circumstances in mind.

### **2 Basic Promotion Direction for Quarantine Measures**

#### **(1) Establishment of the Proactive Quarantine System**

With the recent outbreak of infectious diseases in and out of Japan in mind, measures taken to date for quarantine following the outbreak of animal infectious disease will not suffice to prevent damage from spreading. This underlines the need to establish a proactive quarantine system that emphasizes preventing the

outbreak of infectious diseases in domestic animals by developing an inspection system, planning the implementation of a infectious diseases in domestic animals prevention project (hereinafter referred to as the “prevention project”) and activities, including actively promoting self-quarantine to determine the trend of outbreaks prescribed in Article 5 of the Act on Domestic Animal Infectious Diseases Control (Act No. 166 of 1951; hereinafter referred to as the “Act.”).

**(2) Rapid and proper response from a risk management perspective**

Once a domestic infectious diseases breaks out among animals, it spreads rapidly and extensively and mitigating the damage requires rapid and decisive action. Accordingly, this entails establishing a system to implement surveillance and developing a quarantine promotion system as well as implementing a quarantine exercise on the premise of an outbreak of infectious diseases in domestic animals.

Furthermore, new infectious diseases require rapid and careful action, given the lack of knowledge of pathogens, infectivity or the seriousness of symptoms. A proactive approach is best here: while both national and prefectural governments constantly strive to collect and provide information on overseas disease outbreaks, prefectural governments must promptly report to the national government, which then forms an investigative team if a new infectious disease outbreak is suspected.

**(3) Role played by national and prefectural governments**

In implementing the quarantine of domestic animals, while national, prefectural and city governments (hereinafter referred to as “prefectural government(s)”) take measures to prevent any outbreak and spread of domestic animals’ infectious disease, cooperating by maintaining mutual coordination, they must strive to take measures to control infectious disease such as disseminating correct knowledge, collecting information, analyzing and publishing information, promoting research, cultivating human resources, achieving and maintaining high quality and developing prompt and correct inspection systems.

**(4) Role that should be played by livestock keepers**

Effectively preventing losses incurred due to infectious diseases in domestic animals depends on livestock keepers themselves ensuring daily hygiene management as self-protective quarantine and implementing proper immunization and inspections, etc. Such self-protective quarantine is regarded as underpinning domestic animal quarantine.

The self-protective quarantine comprises two types: one of which spearheaded by prefectural associations of livestock and livestock products hygiene advisers (hereinafter referred to as the “associations”) because the quarantine should be conducted in an organized and unified manner to ensure effective and efficient domestic animal quarantine measures and the other is conducted by an individual livestock keeper.

Furthermore, the organized self-protective quarantine led by associations and other groups should encompass planning an implementation program for self-protective quarantine, disseminating and raising awareness among livestock keepers of the importance of self-protective quarantine, immunizing against clean infectious diseases in domestic animals, organized immunizing in particular areas to prevent any outbreak of domestic animal infectious disease based on surveillance results and voluntarily inspecting in an effective and efficient manner are among the measures that should be implemented.

These groups must also provide guidance as part of closer coordination between national and prefectural governments to facilitate efforts by livestock keepers to individually implement self-protective quarantine.

#### **(5) Global Cooperation in infectious diseases in domestic animals**

Domestic animal infectious diseases are no longer problems unilaterally solvable by one country, but all global nations should cooperate and promote measures. The relevant information should also be exchanged with foreign governments, research institutions and the Office International des Epizooties (OIE) and other international organizations and cooperation in international engagements should be provided for infectious diseases in domestic animals while international cooperation is offered for research into infectious diseases in domestic animals and human resource development.

### **3 Development of a quarantine promotion system**

#### **(1) Strengthening of the information communication system**

- A. To promote smooth quarantine measures, having a proper understanding of local hygienic conditions is crucial, hence the need to strive to collect information through a notification according to the Act, inspection in Article 5 of the Act, the on-site inspection and circuit teaching, etc. in Article 51 of the Act, etc. In particular, there is a need to work closely with relevant parties and promptly collect information so that key hygiene information is highlighted in larger-scale animal facilities, the corporatization of livestock farm management and the development of private inspection institutions.
- B. In addition, as useful domestic animal hygiene information, including scores of slaughtering and poultry inspections at slaughterhouses or poultry dressings can be obtained, there is a need to understand the hygienic conditions by developing closer contact systems and actively exchanging information with these institutions.
- C. Furthermore, it is also important to transmit information to relevant parties quickly and precisely to ensure the collected hygiene information is used effectively. Accordingly, there is a need to promote the exchange of information among

institutions in prefectures, or between prefectural governments and interested organizations or livestock keepers and promptly transmit useful information while using a livestock animal hygiene information system between the national and prefectural governments.

**(2) Strengthening the system for implementing pathological appraisals**

The national government develops Pathological Appraisal Guidance based on the latest scientific knowledge to ensure accurate and prompt inspections, including when such pathological appraisal is required by a livestock hygiene service center. Each prefecture should strive to improve pathological appraisal functions to implement proper pathological appraisals based on this guideline, encourage dissemination and awareness-raising among livestock keepers, private veterinarians and relevant organizations and effectively utilize domestic animal hygiene training sessions held by the national government to maintain and improve technical standards in livestock hygiene service centers.

**(3) Improve the rate of utilization by private veterinarians**

Private veterinarians play an important role in promoting the quarantine of monitored infectious diseases. It is important to upskill such private veterinarians and fully disseminate laws and regulations related to domestic animal hygiene and the Outline of Measures Against Infectious Diseases in Domestic Animals. Accordingly, livestock hygiene service centers should upskill veterinarians and further boost standardization by holding training sessions and study groups as well as ensure facilities for private veterinarians can be used conveniently to improve and enhance the domestic animal quarantine implementation system.

**4 Specific Promotion of Quarantine Measures**

**(1) Preventing outbreaks**

Amid accelerating distribution, the volume of domestic animal and livestock products has grown and covers an increasingly wide area, including progress made to consolidate and corporatize forms of business in the livestock industry and management extending over several prefectures, hence the need to properly determine conditions and the progress of national and local outbreaks of monitored infectious diseases with Appendix 1 “Guidance on Monitored Infectious Disease Surveillance Measures” and effectively implement immunization pursuant to provisions in Article 6 of the Act.

In addition, while present-day breeding livestock is diversified, hygiene requirements for specified domestic animals have also become increasingly stringent, with guidance needed for specified livestock keepers of deer and wild boar, which are added as animals requiring regulation and other specified domestic animals to prevent monitored infectious diseases.

## **A. Notification of outbreaks of infectious diseases**

It is imperative to notify any outbreak of notifiable infectious diseases pursuant to Article 4 of the Act to determine the outbreak of the disease from an early stage. Accordingly, there is a need to fully publicize the details to veterinarians – something on which streamlined quarantine depends - and revising the Act significantly increases the number of notifiable infectious diseases. It is important to ensure these notifiable infectious diseases are notified at an early stage.

## **B. Notification of the outbreak of new disease**

Before the disease named Porcine reproductive and respiratory syndrome (PRRS) was determined, it resulted in unexplained abnormal labors and was known as “heko disease.” If a veterinarian notifies a disease with a pathological condition or treatment outcome that clearly differ from those of previously known infectious diseases in domestic animals, pursuant to the provision in Article 4-2 of the Act, the livestock hygiene service center must implement an inspection and determine whether it is a new, existing, or non-infectious disease.

If it is determined to be a new disease and if the center not only promptly reports to the national government after taking the necessary quarantine measures but also determines a need to prevent any outbreak, inspections should be implemented as specific disease pursuant to Article 5 of the Act.

The national government, which receives such reports, should strive to investigate the causes of the new disease in closer relationship with prefectures. In the event of a new infectious disease, the national government shall take the necessary measures, including revising laws and regulations, after reviewing whether it should be a domestic animal infectious disease or a notifiable infectious disease in light of the investigative results.

## **C. Inspection and injection**

To quarantine monitored infectious diseases, it is important to properly implement necessary quarantine measures, including immunization based on the results, as well as determine the state of infiltration through inspections.

## **D. Report and notify**

A notification or report pursuant to the provisions of Article 12 paragraph 2 of the Act should be conducted as follows:

- (a) The scope of governors of related prefectures in Article 12-2 are those who are governors of prefectures adjacent to the one or more prefecture(s) from which related domestic animals continuously enter.
- (b) Notifications to governors of related prefectures pursuant to the provision in Article 20 paragraph 2 of the Ministerial Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases pursuant to the provision in Article

12-2 of the Act (hereinafter referred to as the “Ministerial Ordinance”) should show measures taken in the previous month in a form conforming to the Ministerial Ordinance Annex Form No.14 by the 10th of each month.

## **(2) Preventing the spread**

Successfully preventing the spread of a domestic animal infectious disease depends on how promptly and effectively the initial quarantine is implemented. Accordingly, there is a need to emphasize proper implementation of the relevant measures and focus on the following points to ensure measures to prevent spreading diseases.

### **A. Notification and report of affected animals, etc.**

To properly implement the initial quarantine, prompt and proper notification on affected animals or animals suspected of being affected and related pathological appraisal pursuant to the provision of Article 13 of the Act is a precondition. Accordingly, the following should be kept in mind:

- (a) There is a need to disseminate pathologies of infectious diseases in domestic animals and provide guidance to them to contact relevant organizations and relevant parties, including livestock hygiene service centers, veterinary clinics and private veterinarians.
- (b) There is a need to disseminate the gist of the Act to veterinarians and give them guidance to promptly notify details of the outbreak pursuant to provisions of the Act.
- (c) If any domestic animal infectious disease is suspected, a pathological appraisal should immediately follow pursuant to the “Pathological Appraisal Guidance” (Notification by the Director-General, Livestock Industry Bureau, the Ministry of Agriculture, Forestry and Fisheries of Japan on October 22, 1998 Ref. No. 10-ChikuA-1937. Hereinafter referred to as “Pathological Appraisal Guidance”)
- (d) In recognizing an outbreak, there is a need to use public relations magazines and take measures effectively while optimally exploiting information always collected to prevent any outbreak, including implementing immunizations, determining the movement of domestic animals and making every effort to prevent the spread of the disease. The governments of the relevant municipality, prefecture and nation must closely notify or contact the relevant organizations at each step.

### **B. Isolation of affected animals, etc.**

It is important to promptly isolate affected animals (or those suspected of being affected) to prevent the spread of pathogens of infectious diseases in domestic animals. Accordingly, there is a need to provide guidance to livestock keepers to promptly isolate animals pursuant to Article 14 of the Act.

**C. A disposition to slaughter**

A disposition to slaughter of affected animals pursuant to the provision in Article 17 of the Act should be properly implemented while taking all aspects of the outbreak of affected animals in the region, rearing status of domestic animals and various factors related to the prevention of the spread into consideration, including the immunization status.

**D. A disposition to slaughter for pathological appraisal**

A disposition to slaughter pursuant to the provisions in Article 20 of the Act should be implemented most effectively and fully based on the purpose in implementing the measures because the disposition is conducted to quickly and accurately diagnose infectious diseases in domestic animals.

**E. Incinerate carcasses and contaminated objects**

Assuming that the epidemic outbreak of domestic animal infectious disease resulted in many carcasses, there is a need to fully cooperate with the relevant organizations to promptly take measures; study and prepare a disposal procedure for carcasses in advance; select a disposal site and establish disposal methods and carcass transportation procedures.

**F. Inspection, injection, dipping or medication**

Inspection, injection, dipping or medication pursuant to the provisions in Article 31 of the Act should be carried out while taking the rearing status of domestic animals and the immunization status in the area surrounding the outbreak site when affected or animals suspected of being affected are found into consideration. The implementation target area shall be within the area of restricted movement pursuant to the provision of Article 32 of the Act as a rule. Furthermore, it should be noted that effective measures should be taken to prevent the spread effectively pursuant to A(d).

**G. Restriction on movement**

The movement of domestic animals pursuant to the provision of Article 32 of the Act should be restricted by determining the minimum range, period and objects that can optimally exploit the spread prevention effects to be restricted, taking the type of domestic animal infectious disease, pathology, transitional status after discovery, local livestock feeding status, transportation and distribution of domestic animals and livestock products, etc. into consideration. Accordingly, the actions to be taken at the outbreak of major diseases should be decided in advance. At this time, unless there is any obstacle in quarantine, special care should be paid to allow domestic animals to move said domestic animals outside the area and ship products, including hen eggs, when directly moving to a slaughterhouse following quarantine measures, including disinfection. To issue

an order to restrict movement, closer communication should be established among relevant prefectures concerning the states of the outbreak and quarantine to effectively implement restrictions of movement measures among the prefectures.

#### **H. Restriction on events at domestic animal gathering facilities and restriction on pastures**

For restrictions on events at domestic animal gathering facilities and the restrictions on pasture pursuant to the provisions of Articles 33 and 34 of the Act, it is important to develop required rules and operate them properly. There is also a need to establish guidelines on hygiene measures in advance and offer guidance to relevant parties in events at domestic animal gathering facilities and pastures to operate them pursuant to the guidelines.

#### **I. Report and notify**

A notification or report pursuant to the provisions of Article 13 paragraph 4 and Article 35 of the Act should be conducted as follows:

- (a) The scope of governors of related prefectures in Article 13 paragraph 4 of the Act and Article 35 are those who govern prefectures adjacent to the prefecture(s), which domestic animals from the prefecture enter continuously.
- (b) The report delivered by telegraph, telephone or similar method to governors of related prefectures pursuant to the provision in Article 25 paragraph 2 of the Ministerial Ordinance pursuant to Article 13 paragraph 4 of the Act and the report to the Minister of Agriculture, Forestry and Fisheries pursuant to Article 25 paragraph 3 of the Ministerial Ordinance shall be reported in accordance with Form 1 in the Appendix.

#### **J. Others**

- (a) At the outbreak of domestic animal infectious disease, thorough epidemiological investigations should be conducted, including the domestic animal introduction status, coming and going of relevant parties, feed suppliers, domestic animal holding status by animal quarters, outbreak status of abnormal domestic animals other than animals affected and suspected of being affected and a decision on whether or not to implement immunization to clarify the infection route is needed as well as a detailed record of related matters. At this time, affected and related prefectures should remain in close contact and actively conduct spot inspections in farms epidemiologically related to those affected pursuant to Article 51 of the Act to intensify the prevention of spread.
- (b) If the prefectures obtain information on the outbreak of a monitored infectious disease in a slaughterhouse, as in the case of (3), they should conduct spot inspections in shipping and epidemiologically related farms to thoroughly

prevent any outbreak and spread of disease.

### **(3) Planning upon implementation of the prevention project**

To smoothly promote the prevention project, prefectures should formulate domestic animal quarantine plans to prevent any outbreak and spread of monitored infectious diseases in accordance with the actual status of each community. When formulating the plans, they should consider the planning concept and outbreak status of the monitored infectious disease in the community and formulate a plan in accordance with the Appended Form 2.

In addition, they should change the prevention project plan in accordance with the Appended Form 3 if an outbreak of a domestic animal infectious disease forces them to adopt new domestic animal quarantine measures.

## **5 Self-protective quarantine**

Daily in-depth hygiene management is what underpins efforts to prevent the outbreak of infectious diseases in domestic animals and it is also important to properly implement immunization and inspection, etc. Moreover, as well as monitored infectious diseases, other infectious diseases in domestic animals also require thorough proper voluntary measures, hence the need to give guidance to relevant parties to implement effective and efficient self-protective quarantine based on local domestic animal hygiene conditions and taking the following points into consideration:

- (1) To prevent outbreaks of infectious diseases, there is a need to give guidance on how to formulate a rearing hygiene management program, including immunization, in a community to livestock keepers and relevant organizations as well as thorough daily hygienic rearing management, including limited access, strict enforcement of cleaning and disinfection, control of household insects, individual observation and implementation of its record, temporary isolation rearing of introduced domestic animals, securing ventilation/thermal insulation and preventing stress caused by close rearing. In particular, the guidance on hygiene measures referencing the Hygiene Measures Guideline in Appendices 2-6 to dairy male calf facilities, pastures for beef cattle, swine housing including boar farms, poultry housing including hatcheries and group horse-breeding facilities, including racecourses, where the prevention of loss caused by improper general feeding control is important.
- (2) Guidance/advice on associations are required for the self-protective quarantine project by associations including immunization (hereinafter referred to as the "association project") focusing on the following points and it is important to further improve and enhance the self-protective quarantine system involving the entire community with the unity of livestock keepers and livestock hygiene service centers.

- A. The immunization project by associations is implemented, focusing on infectious diseases requiring a given rate of immunization to be secured within a community. Immunization can be classified into two groups: vaccines given voluntarily by livestock keepers and vaccines implemented by associations in a well-planned manner, including for infectious bovine rhinotracheitis.

In formulating immunization project plans by associations, information on the status of the outbreak of the infectious diseases in domestic animals must be actively utilized, as provided for in Article 5 of the Act and in addition, trying to coordinate with the prevention project, it is important to prepare an immunization program, have private veterinarians engaged in association projects (hereinafter referred to as “designated veterinarians”) actively advise on a patrol plan and promote the proper implementation of immunization according to the plan.

- B. Other projects by associations support cleanup efforts at domestic animal production farms and the production of safe livestock products. With a view to facilitating in-community projects, due consideration shall be paid to formulate and coordinate plans.
- C. As association projects require the participation of private veterinarians, particularly designated veterinarians, advice should be given concerning the placement and utilization of private veterinarians, who are required to implement projects. In designating veterinarians, the designation of veterinarians who usually offer medical care to livestock keepers should be prioritized following discussion with the Japan Veterinary Medical Association (JVMA). In particular, in communities where it is difficult to secure designated veterinarians, by eliciting the cooperation of municipalities, various kinds of agricultural organizations and private companies, more effective utilization of member veterinarians is required.
- D. Associations should smoothly promote these association projects considering requests made by livestock keepers and strive to rationalize and streamline operational management by exchanging information with other associations. In future, associations should study how to develop and enhance operating fundamentals by diversifying project contents as well as formulating self-protective quarantine plans and expanding coordination works.

## **6 Quarantine of transboundary animal diseases, etc.**

Opportunities for monitored infectious diseases from abroad to invade may proliferate because of the range of animals and livestock products imported from various countries as global trade becomes increasingly liberalized while transboundary animal diseases, including foot-and-mouth, exist in large areas of the world. Accordingly, in future, more attention should be paid to prevent the invasion of monitored infectious diseases, including transboundary animal diseases accompanied by these imports of

animals and livestock products as part of efforts to take all possible quarantine measures.

**(1) Establishment of an import inspection system**

To take all possible measures to prevent invasions of monitored infectious diseases, it is important to integrally and effectively promote import quarantines at the Animal Quarantine Service and quarantine measures, including isolation breeding areas for imported livestock post-quarantine (hereinafter referred to as “import inspections”). Accordingly, it is necessary for Animal Quarantine Service and prefectures to give guidance to relevant parties pursuant to Annex 7 “Import Inspection Guidance for Imported Livestock.”

**(2) Strengthening the quarantine system, including transboundary animal diseases**

- A. Each prefecture must take measures to study and prepare specific quarantine manuals based on Specific Domestic Animal Infectious Disease Quarantine Guidelines (Specific Domestic Animal Infectious Disease Quarantine Guidelines based on Article 3-2, paragraph (1); the same shall apply hereinafter), establish an emergency quarantine system as well as disseminate knowledge and raise awareness of relevant technicians and livestock keepers.
- B. In case of the outbreak of unidentified disease, which is suspected of being a domestic animal infectious disease, measures should be taken pursuant to the provision of Article 4-2 of the Act and if it appears to be the first outbreak of said disease in Japan, the national government should be immediately notified. If required and directed by national government, materials should be collected pursuant to Specific Domestic Animal Infectious Disease Quarantine Guidelines and Pathological Appraisal Guidance and brought or sent to the National Agriculture and Food Research Organization (NARO) National Institute of Animal Health (NIAH) (hereinafter referred to as “NIAH”). Furthermore, the final pathological appraisal was made following reviews by the Animal Health Division, Food Safety and Consumer Affairs Bureau of the Ministry of Agriculture, Forestry and Fisheries (hereinafter referred to as “Animal Health Division”), research institutions including NIAH. On this occasion, if the disease is likely to exert a key influence on the livestock industry, prompt actions are required after giving temporary guidance on measures to prevent the spread of disease until determining pathologies to prevent it spreading to surrounding areas.
- C. The national and prefectural governments should implement quarantine training on quarantine measures and methods, including transboundary animal diseases, to contribute to effective quarantine activities. In addition, the national government should store necessary vaccines, including against foot-and-mouth disease, to prepare for contingencies.

- D. The national government should collect information on any outbreaks of disease overseas and take all possible measures to prevent the invasion of transboundary animal diseases, develop technologies necessary to prevent such diseases spreading and diagnostic systems.

## **II Individual Disease Control**

### **<<Infectious diseases in domestic animals>>**

#### **1 Infectious Encephalitis**

Infectious encephalitis listed in Article 2 of the Act is an infectious disease caused by arboviruses which cause encephalitis, including Japanese, western equine and Venezuelan equine strains. As of now, only Japanese encephalitis affects those in Japan, with the major risk being death at onset, a poor prognosis for horses, stillbirths and miscarriages and the onset of azoospermia when breeding pigs. Quarantine measures should be taken, focusing on thorough forecasting measures that center on pigs and breeding pigs.

(Measures to Prevent Outbreaks)

- (1) It is important to prevent any outbreak of Japanese encephalitis by strictly enforcing immunization. For pigs in particular, there is need to give guidance to livestock keepers to finish inoculating breeding sows that have not passed summer season and breeding boars at least 6 weeks before the ascent of antibodies. There is also a need to provide guidance to implement immunizations when required for low-parity sows.
- (2) To encourage quarantining against this disease, including Japanese encephalitis transmission forecasts and study of immunization implementation, there is a need to implement a statistical survey of antibodies pursuant to the provision of Article 5 of the Act when required as well as utilize the results of a statistical survey on antibodies of this disease effectively in slaughterhouses in cooperation with the public health authorities.

(Measures to Prevent its Spread)

- (3) For Japanese encephalitis, neither a disposition to slaughter of affected animals pursuant to the provision of Article 17 of the Act nor the disposition of animals suspected of being affected for pathological appraisal pursuant to the provision of Article 20 paragraph 1 of the Act should be implemented.
- (4) As required, there is a need to give guidance on bloodsucking insects, including insecticide application to livestock keepers in affected and surrounding farms.

#### **2 Anthrax**

In many cases, this disease stands out as an example of sudden death. If carcasses of affected animals or animals suspected of being affected and contaminated objects are not properly disposed of, its features mean the pathogen of this disease will continue to survive and hamper any cleanup efforts. In the case of outbreaks in dairy farms, the disease forces them to dispose of milk and causes a backlog of damage, given the expanded and increased distribution of milk. Accordingly, for this disease,

there is a need to take quarantine measures, focusing on enlightenment and underlining the importance of prompt and proper pathological appraisal when discovering suspected cases of this disease to relevant parties and thorough implementation of early discovery and prompt quarantine measures.

(Measures to prevent any outbreak)

- (1) There is a need to give guidance to livestock keepers in areas where pathogens of this disease are endemic to strive to prevent any outbreak based on the strictly enforced immunization.

(Measures to Prevent the Spread)

- (2) There is a need to give guidance to relevant parties to immediately notify a livestock hygiene service center if domestic animals suddenly die and to avoid mixing milk produced at the breeding facilities with milk delivered from other facilities until the pathological appraisal results on domestic animals emerge.
- (3) If a suspected case of this disease is discovered, there is a need to prevent blood leaking from natural orifices and immediately implement a pathological appraisal. Guidance to relevant parties is also required to voluntarily refrain from moving articles which may propagate the pathogens of this disease, including domestic animals and milk. Furthermore, when collecting materials for pathological appraisal, it is important to minimize incision sites and prevent contamination caused by blood and body fluids leaking from said sites.
- (4) If a pathological appraisal reveals a positive ascoli reaction and detects *Bacillus* with capsule, animals should be regarded as suspected carriers of this disease, proper measures should be immediately implemented to prevent any spread thereof and a subsequent pathological appraisal should be continuously conducted.
- (5) If the outbreak of this disease is confirmed, measures should be immediately taken to limit the movement of articles which may propagate the pathogens of this disease, including domestic animals and milk, pursuant to the provision in Article 32 paragraph 1 of the Act. In addition, during the period of restriction of movement, guidance to producers is required to implement inspections pursuant to the provision of the Act and dispose of milk.
- (6) In incinerating carcasses and contaminated objects pursuant to the provisions of Articles 20 and 23 of the Act and disinfecting animal quarters pursuant to the provision of Article 25 of the Act, attention should be paid to the following points to take measures:
  - A. Carcasses of affected animals and suspected animals should be incinerated as a rule.
  - B. Animal quarters for affected animals and animals suspected of being affected

which are difficult to disinfect, unnecessary contaminated objects, wooden products including floorboards and invaluable contaminated objects should be incinerated.

- C. As well as animal quarters where disease occurs, whole facilities, including relevant playgrounds, should also be disinfected.
- (7) Milk to be incinerated pursuant to the provision of Article 23 of the Act includes milk in animal quarters and in transit to milk collection centers as a rule, which should be disposed of as follows:
- A. Take measures as for milk contaminated by *Bacillus anthracis*.
    - (a) Anthrax has been found in milk by assessing culture and other measures.
    - (b) Milk from a cow suffering from anthrax with a remarkably reduced milk yield.
    - (c) Milk from a cow suffering from anthrax with a fever of 40 degrees or higher.
  - B. The following milk can be handled as potentially contaminated by anthrax:
    - (a) Milk from a cow suffering from anthrax, on a day before pathogenesis or later (excluding that shown in (b)) and milk combined with it.
    - (b) Milk from a cow living with another cow suffering from anthrax with a fever of 40 degrees or higher and milk combined with the same.
    - (c) Milk from lactating cows bred at a location likely to be contaminated with *Bacillus anthracis* due to the delay in finding affected animals (depending on the site of occurrence, the status at the time of occurrence and subsequent disposal, generally one (1) week after disposal of affected animals.)
- (8) Measures with antimicrobial substances should be immediately taken to cattle living in the same animal quarters where the outbreak occurs, pursuant to the provision of Article 31 of the Act and to prevent any continuous outbreak. Immunization to prevent the spread should be conducted for cows living in the same animal quarters and cattle bred in contaminated animal quarters when ten (10) days have passed since the last occurrence of any disease affecting animals.

### **3 Brucellosis**

This disease is being cleaned through quarantine measures based on a disposition to slaughter pursuant to the provision of Article 17 of the Act of affected animals discovered at the inspection pursuant to the provision of Article 5 of the Act and the existing inspection.

There is a need for ongoing quarantine measures, focusing on maintaining cleanliness and achieving a cleanup.

In future, national cleanup confirmation surveillance for this disease should be conducted according to the provision of the Animal Health Division Director.

#### **4 Tuberculosis**

This disease is being cleaned through quarantine measures based on a disposition to slaughter and pursuant to the provision of Article 17 of the Act of affected animals discovered at the inspection pursuant to the provision of Article 5 of the Act and the existing inspection.

Ongoing quarantine measures are needed, focusing on maintaining cleanliness and achieving cleanup. In addition, collaborations with meat inspection institutions should be strengthened and if affected animals at slaughterhouses are confirmed, proper quarantine measures should be taken pursuant to I-4(2)J(b).

In future, national cleanup confirmation surveillance for this disease should be conducted according to the provision of the Animal Health Division Director.

#### **5 Johne's disease**

For this disease, measures to prevent disease spreading should be taken by a disposition to slaughter affected domestic animals and disinfection pursuant to Measures to Prevent Occurrence in the proper rearing hygiene management and the provision of Article 17 of the Act and comprehensive measures should be promoted pursuant to the "Outline of John's Disease Quarantine Measures for Cattle" (Notification by the Director-General, Food Safety and Consumer Affairs Bureau, MAFF, 18 Shoan No. 8586 dated November 1, 2006).

#### **6 Piroplasmosis and anaplasmosis**

These years, cleanup has been achieved without any outbreak of Piroplasmosis caused by *Babesia bigemina* and *Babesia bovis* and anaplasmosis caused by *Anaplasma marginale*. In future, it will be important to confirm the cleanup of this disease by implementing an inspection pursuant to the provision of Article 5 of the law as required. Quarantine measures should be taken, focusing on further progress of the cleanup.

(Measures to prevent any outbreak)

- (1) In communities where this disease breaking out occurred previously, guidance should be given to livestock keepers to exterminate ticks attached to cattle's bodies.
- (2) The cleanup of *Boophilus microplus* and pathogens in the region should be confirmed by implementing an inspection pursuant to the provisions of Articles 5 or 51 of the Act in a community other than (1).

(Measures to Prevent the Spread)

- (3) In case of the outbreak of this disease, movement should be restricted pursuant to the provision of Article 32 paragraph 1 of the Act as required in consideration of the outbreak status and the cattle movement status. In particular, cattle living with affected animals or suspected carriers should be inspected, ticks investigated, quarantine measures taken pursuant to the results and related prefectures notified immediately.

## **7 Transmissible spongiform encephalopathy (TSE)**

Article 2 of the Act and the Government Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases Control (Government Ordinance No. 235, 1953; hereinafter referred to as the "Cabinet Order") transmissible spongiform encephalopathy (TSE) listed in the left-hand column of the table in Article 1 is caused by prion, including Bovine Spongiform Encephalopathy and scrapie.

The Bovine Spongiform Encephalopathy, transmissible spongiform encephalopathy (TSE) in cattle, was first confirmed in Japan in 2001. Due to countermeasures pursuant to the Act on Special Measures Concerning Bovine Spongiform Encephalopathy (Act No. 70 of 2002), the Basic Plan for Bovine Spongiform Encephalopathy (published by the Minister for Agriculture, Forestry and Fisheries and the Minister of Health, Labour and Welfare on July 31, 2002) and the Specific Domestic Animal Infectious Disease Quarantine Guidelines concerning Bovine Spongiform Encephalopathy (published by the Minister for Agriculture, Forestry and Fisheries), no further outbreak was recorded in cattle born in and after February 2002. Accordingly, there is a need to continue promoting these measures.

Sporadic outbreaks of scrapie, which is a transmissible form of spongiform encephalopathy (TSE) in sheep and goats, have been reported in Japan. In recent years, outbreaks of atypical scrapie, the properties of which differ from those confirmed in Japan, were confirmed. Although many aspects of this atypical scrapie remain unclear, quarantine countermeasures should be promoted, focusing on efforts to confirm cleanup of this disease pursuant to the "Manual for Transmissible Spongiform Encephalopathy (TSE) Inspection" (Notification by the Director-General, Livestock Industry Department, Agricultural Production Bureau, MAFF 15 Seichiku No. 1337 dated June 17, 2003) while identifying epidemiologically relevant sheep or goats just as for conventional scrapie.

## **8 Equine infectious anemia**

This disease breaking out have continued through the ages in Japan, but since the serodiagnostic strategy with agar gel immunodiffusion was established, we believe quarantine measures have cleaned up the condition, based on securing exposure of

horses affected with this disease and disposition to slaughter affected animals pursuant to the provision of Article 17 of the Act. Accordingly, there is a need to take quarantine measures emphasizing invasion prevention in future.

(Measures to prevent any outbreak)

- (1) In preventing the outbreak among imported horses (excluding those for breeding that are reared separately after import from those for other usages that are reared in Japan), there is a need to give advice and guidance to imported livestock keepers to have such horses undergo an inspection for this disease during the import inspection period at intervals of one (1) month or more after import, reflecting the incubation period of this disease. Besides, the import inspection is shortened to one (1) month or less month for horses sent overseas. Advice and guidance should be given to them to have an inspection immediately before the end of the period if possible.
- (2) Advice and guidance should be given to imported livestock keepers to isolate imported horses for fattening from horses bred for other purposes in Japan after import until shipping to slaughterhouses.
- (3) Those overseeing domestic animal quarantine should inspect for this disease pursuant to the provision of Article 51 paragraph 1 of the Act as required.

(Measures to Prevent the Spread)

- (4) There is a need to order animals affected with this disease to be thoroughly isolated immediately pursuant to the provision of Article 14 paragraph 1 of the Act and conduct the slaughter within two weeks of any outbreak pursuant to the provision of Article 17 of the Act.
- (5) A disposition to slaughter for pathological appraisal pursuant to the provision of Article 20 paragraph 1 of the Act should not be conducted as a rule.
- (6) In case this disease breaks out in facilities where horses gather, including racecourses, movement should be restricted pursuant to the provision of Article 32 paragraph 1 of the Act as required without missing the timing as well as investigating horses living with the affected animals and animals suspected of being affected and immediately report to related prefectures taking the outbreak status, the layout of the racing stable where the outbreak occurred and the horse movement status into consideration.

## **9 Newcastle disease**

Thorough immunization mainly conducted in self-protective quarantine projects has prevented pandemics all over Japan, but considering knowledge of epidemiology, it is natural to conclude that the virus of this disease exists widely in the open. Once the outbreak occurs, the damage may be huge, given the larger-scale and more

concentrated breeding. Accordingly, there is a need to continuously take quarantine measures emphasizing outbreak prevention by promoting the effective implementation of voluntary immunization, centering on association projects.

(Measures to prevent any outbreak)

- (1) To prevent this disease, it is more important to get a proper picture of the immunization status in a community regularly, give guidance to livestock keepers to properly immunize animals and take thorough measures to prevent any outbreak than actively conducting spot inspections as required pursuant to the provision of Article 51 of the Act. Furthermore, for immunization, advice and guidance on preparing an effective immunization program should be actively given to relevant parties, reflecting characteristic differences among the types of vaccine and the outbreak status in a community.
- (2) It is important to clearly explain to and provide guidance to relevant parties to prevent the invasion of this disease by wild and pet birds, which seem to be involved in disseminating this disease.

(Measures to Prevent the Spread)

- (3) If any doubts have arisen about the outbreak of this disease in a community, which has not yet experienced any outbreak, immediate pathological appraisal is required alongside guidance on proper measures to prevent spread other than a disposition to slaughter.
- (4) A disposition to slaughter affected animals pursuant to the provision in Article 17 of the Act should be effectively implemented, taking the bigger picture of the course of the outbreak, outbreak status, presence or absence of symptoms and the immunization status into consideration. In particular, for early outbreaks, effective quarantine measures should be taken by promptly implementing a disposition to slaughter for units of chicken flocks. If this disease has been spread over a wide range or if the outbreak occurred in a contaminated area at the time of discovering this disease, after investigating the pathology and the implementation status of immunization, quarantine measures other than slaughter disposition including observation through isolation and disinfection of objects and animal quarters should be taken.
- (5) Under circumstances where the virus of this disease affects a wide area even now, a disposition to slaughter is not always the most reasonable quarantine measure. As a rule, a disposition to slaughter pursuant to the provision of Article 17 of the Act may not be conducted. However, if it is difficult to ascertain the immunization status of the animals suspected of being affected and if it is recognized as necessary and effective to prevent the spread of disease, a disposition to slaughter may be required.
- (6) If chickens in the affected facilities have not shown symptoms, they should be

promptly isolated pursuant to the provision of Article 14 paragraph 1 of the Act.

- (7) Emergency immunization should be conducted against chickens in affected facilities and those in areas surrounding the outbreak community pursuant to the provision of Article 31 of the Act when necessary in consideration of the breeding status, the immunization status and whether there are any abnormal chickens. The implementation scope shall be within the area of restricted movement pursuant to the provision of Article 32 paragraph 1 of the Act as a rule.
- (8) The restriction of movement pursuant to the provision of Article 32 of the Act should be implemented around the affected farm in consideration of geographical conditions and the breeding status without losing timing. In addition, the chickens in the community during said period should be inspected pursuant to the provision of Article 31 or 51 of the Act to confirm the health of chickens. The restriction of the movement can be lifted with the immunization status in mind if no new outbreak is found for three (3) weeks of the observation period after measures against the last outbreak were conducted.

If no quarantine obstacle is found after taking the required measures, including disinfection and the restriction of usage during the period of restriction of movement, for shipments of chicken eggs and that of meat-type chickens to the nearest poultry dressing only, chickens and their by-products can be moved outside the restricted area.

## **10 Avian salmonellosis**

Among the pathogens provided for in Article 1 of the Ministerial Ordinance, only the outbreak of pullorum disease caused by *Salmonella pullorum* has occurred in Japan. The pullorum disease is propagated mainly by egg transmission. As of now, the disease is only sporadic due to the implementation of quarantine measures based on voluntary inspections and prevention projects by livestock keepers until now. Accordingly, there is a need to continuously take quarantine measures that emphasize exposures of affected chickens in breeder chicken farms and maintaining cleanliness through selection.

(Measures to prevent any outbreak)

- (1) It is important to actively give guidance to livestock keepers to inspect breeding hens and candidate breeding hens midway through the chicken period and before egg production gets underway. Breeding hens should be investigated at least once yearly pursuant to the provision of Article 5 of the Act.
- (2) Under conditions of enhancing cleanness, to ensure any outbreak of this disease can be thoroughly prevented in future, it is important to continuously enlighten this disease and collect information with a focus on chick breeding farms, the main sites where this disease breaks out and there is also a need to conduct spot

inspections as required pursuant to the provision of Article 51 of the Act, understand the existing conditions of this disease and provide guidance.

- (3) Chickens vaccinated with *Salmonella enteritidis* are diagnosed as antibody positive during pullorum disease inspections. There is a need to implement differentiating it from similar diseases (all chickens) for unvaccinated chickens with signs.

(Measures to Prevent the Spread)

- (4) As a general rule, an early and thorough disposition to slaughter for affected animals should be ordered pursuant to the provision of Article 17 of the Act.
- (5) Guidance should be given to livestock keepers to rapidly dispose of eggs produced by affected chickens or chickens suspected of being affected, including antibody-positive chickens exposed in voluntary inspections.
- (6) If this disease breaks out in a non-breeder chicken farm, spot inspections are required immediately pursuant to the provision of Article 50, tracking back relevant breeder chicken farms. If contamination is confirmed, guidance should be given to livestock keepers to take sufficient measures for cleanup.

## **11 Foul brood**

For this disease, the following quarantine measures should be taken.

(Measures to prevent any outbreak)

- (1) To enhance the quarantine effect of Foul brood, with the pathology in mind, a voluntary inspection system should be established in the daily feeding control, including livestock keepers' observation of honey bees in and out of beehives. Accordingly, necessary advice and guidance should be given to relevant parties, including formulating inspection implementation plans that enable livestock keepers and related organizations to effectively conduct voluntary inspections.
- (2) It is important for not only stationary and transitional beekeepers but also for facility horticulturists and hobby beekeepers to ascertain the actual states of beekeeping and distribution of honeybees daily. Guidance should be given to avoid neglecting honeybees, as required, inspections should be conducted pursuant to the provision of Article 5 or 51 of the Act to prevent any outbreak.

(Measures to Prevent the Spread)

- (3) Honeybees are not covered by a disposition to slaughter in Article 17 of the Act. But it is highly likely that honeybees living in beehives comprising contaminated objects are carriers of pathogens of this disease. There is a need to instruct livestock keepers to incinerate them, too when incinerating contaminated objects.
- (4) Incineration of contaminated objects pursuant to the provision of Article 23 of the

Act is applied only to beehives, where honeybee broods affected with this disease are fed and combs in the beehives. Tests should be repeated for other remaining beehives pursuant to provisions of Article 31 or 51 of the Act and if infection is confirmed, the hives should be incinerated after carefully studying the scope.

- (5) The movement of honeybees and objects that may spread pathogens of Foul brood should be restricted pursuant to the provision of Article 32 paragraph 1 of the Act as a rule. In this case, if a prefectural governor and a Director of the livestock hygiene service center or an animal quarantine officer in a breeding area immediately before transfer certifies no abnormality in this disease, the movement is permitted.

Furthermore, the effective period of the certificate is 30 days as a rule. However, if no quarantine problem is detected in consideration of the period when honeybees collected honey in the breeding area immediately before transfer and the hygiene status in an area moved after transfer, the restriction on movement can be lifted. In issuing the certificate, it is necessary to use a unified form of the certificate as shown in Appended Form 4 and promote effective quarantine of this disease.

## <<Notifiable infectious diseases>>

### 12 Bluetongue

Generally, this disease results in severe symptoms for sheep but none for cattle. However, in recent years, as this disease, which disturbs the swallowing mechanism, was recognized in cattle in Japan, forecasting the outbreak using the following means and quarantine measures are required to prevent propagation:

- (1) This disease shows clinical symptoms including fever, respiratory distress and salivation and sometimes swallowing disturbance, including backflow of drinking water and difficulty swallowing. These symptoms closely resemble those of Ibaraki disease and it is difficult to differentiate from other diseases based on clinical symptoms. Guidance is required for livestock keepers to immediately notify livestock hygiene service center when recognizing these and similar symptoms.
- (2) For proper occurrence forecasting, antibody inspections on affected and epidemically related farms and other inspections should be conducted to ascertain the prevalence of antibodies.
- (3) This disease prevails from the beginning of fall to the beginning of winter and is caused by bloodsucking insects. In communities where antibody-positive cattle are recognized in antibody tests, there is a need to give guidance to livestock keepers to control the insects by ensuring good hygiene in cattle barns.

- (4) If the outbreak of this disease is confirmed or suspected, the outbreak status and quarantine measures should be reported to the Animal Health Division.

### **13 Akabane disease**

This disease propagates cyclically in the context of changes of the antibody retention rate accompanied by the update of feedlot cattle. Accordingly, when it breaks out, quarantine measures must be taken, focusing on preventing the outbreak by identifying signs of epidemic of this disease from an early stage based on the prevalence of antibodies and the strict and effectively timed enforcement of immunization.

- (1) There is a need to decide whether immunization is required given the past outbreak status and antibody kinetics in the area. If immunization is conducted, guidance should be given to livestock keepers to finish inoculating cattle used for breeding before the epidemic period.
- (2) As the propagation of this disease deeply relates to air streams and bloodsucking insects, there is a need to study past outbreak pathways and give guidance to livestock keepers to thoroughly give immunization as swiftly as possible in an area where immunization is required.

### **14 Malignant catarrhal fever**

This disease has two types: wildebeest-associated type MCF: WA-MCF and sheep-associated type MCF: SA-MCF. Although an outbreak of the WA-MCF strain was recorded in Africa, there have been no outbreaks in Japan. Conversely, outbreaks of SA-MCF occur worldwide, including Japan. The pathogenic virus of WA-MCF has also been identified, allowing etiological diagnosis, but not that of SA-MCF.

As Bovines and Cervidae are infected with and have the onset of both types after contact with animals with a latent infection during the perinatal period (WA-MCF: gnu and SA-MCF: sheep), guidance should be given to livestock keepers who keep several animals, including sheep and cattle, to isolate each species. In particular, there is a need to give guidance to avoid contact with sheep, cattle and deer before or after childbirth.

### **15 Chuzan disease**

This disease prevailed from 1985 to 1986; mainly in Kyushu, Chugoku and Shikoku, since when the existence of the virus of this disease has been confirmed. There is a need to continuously check for the prevalence of antibodies as well as take quarantine measures, focusing on efforts to prevent outbreaks by implementing immunization;

mainly to cattle to be used for breeding as required with the possibility of recurrence in mind.

## **16 Bovine viral diarrhea/mucosal disease**

The outbreak of this disease often occurs in suckler herds and range cattle, which are kept in groups and pregnant cows may have fetal infections. It is important to prevent outbreaks by implementing immunization in a well-planned manner in areas with outbreaks. In addition, if continuously affected cattle have been recognized in the outbreak herds, quarantine measures should be taken, focusing on voluntary selection.

- (1) There is a need to give guidance to livestock keepers to strive to prevent any outbreak through immunization of feeder cattle in areas in which this disease has broken out or feeder cattle in farms which often introduce cattle. In implementing immunization to breeding cattle, if fetuses from early to mid-stages of pregnancy periods are infected with the virus, immune tolerances, stillbirths and miscarriage, or a congenital anomaly may result. Guidance should be given to relevant parties to complete inoculation before copulation.
- (2) Antigen tests should be conducted to feedlot cattle in (1) as required and when continuous infection is suspected, another antigen test should be conducted to confirm whether a continuous infection is present.
- (3) In case this disease breaks out, there is a need to rapidly ascertain the immunization status and give guidance on implementing immunization for uninoculated cattle as well as to livestock keepers to immediately start isolation breeding, stop the shared use of breeding stock and implement voluntary selection promptly because the continuously affected cattle may propagate the disease via placental infection or semen.
- (4) Details of quarantine measures shall be determined by the Director of the Animal Health Division.

## **17 Infectious bovine rhinotracheitis**

The pathogenic virus of this disease is still likely to exist widely outside. In particular, it causes extensive damage during outbreaks, particularly in cow group breeding facilities. Accordingly, there is a need for quarantine measures emphasizing loss prevention at facilities.

- (1) Cattle with viruses often have the onset of this disease due to stress sensitization caused by cold climate, pregnancy, transportation, etc. Guidance on effective immunization should be given to livestock keepers so that sufficient immunity can be conferred before the stress sensitization (before copulation, about a few

weeks before transportation, etc.).

- (2) There is a need to give guidelines to livestock keepers to select cattle that has been immunized for this disease at the time of introduction and immunize the cattle herd of the introducing farms immunized in advance.
- (3) The mortality of this disease is naturally low: 1-3%, but for infections mixed with bacteria and other viruses, the mortality will be higher. Guidance should be given to relevant parties to improve the feeding environment, administer antimicrobial substances as required, etc., for cattle with the onset of this disease, aiming to prevent loss of livestock with a central focus on cattle fed in group breeding facilities.

## **18 Bovine Leukosis**

This disease breaking out have been increasing in Japan in recent years, which has seen more and more damage to production sites. Accordingly, parties interested in this disease should join together to take proper quarantine measures according to the infiltration state and clean up farms and communities pursuant to “Formulation of Guideline for Hygiene Measures against Bovine Leukosis” (Notification by Director-General, Food Safety and Consumer Affairs Bureau, MAFF, 26 Sho No. 6117 dated April 2, 2015).

## **19 Aino virus infection**

The movement of the antibody of this disease started to be confirmed at the end of 1995 around Southern Kyushu while concurrent abnormal labors caused by the virus behind this disease were also recognized. Quarantine measures against this disease should be implemented like Akabane disease caused by the congenic virus.

## **20 Ibaraki disease**

Infection with this disease is caused by bloodsucking insects and areas affected by the outbreak have been limited to the south of Kanto, although Kyushu has also been affected in recent years. Quarantine measures should be taken, focusing on guidance of implementing immunization based on occurrence forecasting.

- (1) There is a need to decide whether immunization is required, taking the past outbreak status and antibody possession status into consideration. Guidance should be given to livestock keepers to finish inoculation by the end of June.
- (2) This virus rapidly propagates throughout a wide area and infects both beef and dairy cattle with the onset of the disease (incidence of disease: 1-2%). Guidance of thorough immunization should be given to livestock keepers.

## **21 Bovine papular stomatitis**

The first outbreak of this disease occurred in imported beef cattle in 1969. Major symptoms include papules and lesions forming in the mouth, breast and nipples. In particular, as initial lesions, including blistering, resemble foot-and-mouth disease, it is important to differentiate such diseases. If a domestic animal emerges with symptoms that indicate this disease, after properly ascertaining the clinical symptoms and the status of the epidemiological spread, the disease should be differentiated from foot-and-mouth disease and others. If clinical epidemiologic differentiation is difficult, the status should be reported to the Animal Health Division immediately and measures taken pursuant to the Specific Domestic Animal Infectious Disease Quarantine Guidelines.

## **22 Bovine epizootic fever**

Infection with this disease is caused by bloodsucking insects and areas affected by the outbreak have been limited to the south of Kanto, although Kyushu has also been affected in recent years. Quarantine measures should be taken, focusing on guidance of implementing immunization based on occurrence forecasting.

The way this disease propagates is strongly dictated by air streams and bloodsucking insects and the outbreak status varies depending on areas. However, latent infections rarely exist and most animals have an onset of the disease. Accordingly, immunization should be conducted taking the past outbreak status and antibody possession status into consideration. In particular, there is a need to give guidance to livestock keepers to complete immunization by the end of June in the case of lactating cows and breeding beef cattle.

## **23 Tetanus**

The outbreak of this disease tends to sporadically occur over an endemic area and infection also occurs from a wound site. This disease has epidemiological characteristics, including a birth canal infection related to delivery, postoperative infection related to castration and docking and umbilical cord contamination of newborns. Accordingly, quarantine measures should be taken, focusing on immunization during periods prone to infection including delivery, castration and docking of susceptible domestic animals in the epidemic area and prophylactic administration of antibacterial agents. Besides, the characteristics of the causative organism result are prone to attract this disease when disposing of carcasses contaminated with pathogenic bacteria.

## **24 Blackleg**

The outbreak of this disease is often found in group breeding facilities for fattening

cattle. If the quarantine measures are delayed or inadequate, there is concern at the risk of vast damage caused by an epidemic outbreak, which underlines the need to take quarantine measures emphasizing early detection of abnormal cattle around these facilities, mitigation of loss at the time of discovery and thorough immunization in endemic areas.

- (1) To minimize damage caused by this disease, it is important to give guidance to relevant parties to ensure swift notification in the event of any outbreak of abnormal cattle and develop a proper quarantine system for prompt diagnosis/pathology determination.
- (2) If a case of acute death is suspected of being attributable to this disease, procedures to differentiate the disease from anthrax and others should be implemented immediately. On this occasion, when collecting materials for pathological appraisal, there is a need to prevent environmental contamination with pre-existing pathogens, including the minimum incision of carcasses.
- (3) If carcasses or objects contaminated with pathogens of this disease are not treated properly, pathogens will invariably be present given their characteristics. When handling carcasses contaminated with pathogens, there is a need to prevent them spreading and eliminate pre-existing pathogens at the same time.
- (4) In finding abnormal livestock suspected of being infected with this disease, it is important to collect materials required for pathological appraisal, including subcutaneous exudate, wherever possible and prevent loss by administering antibacterial agents promptly. Furthermore, guidance should be given to livestock keepers to conduct immunization to domestic animals living with those affected and feeding cattle in contaminated animal quarters. However, if there is a risk of this disease spreading rapidly throughout the entire cattle group, guidance should be given to administer antimicrobial substances before this immunization.

## **25 Leptospirosis**

The infectivity of domestic animals vary depending on serum types (limited to *Leptospira pomona*, *Leptospira canicola*, *Leptospira icterohaemorrhagiae*, *Leptospira grippityphosa*, *Leptospira hardjo*, *Leptospira autumnalis* and *Leptospira Australis*). Cattle and dogs are infected with *Leptospira* excreted in the urine of wild rodents, etc. via surface water and soil. The duration of carriage depends on the species: several weeks in the case of cattle and several years in case of dogs. Moreover, there are many concealed infections. *Leptospirosis* is excreted in urine, which harbors new sources of infection and causes public health problems. Accordingly, the following should be focused on to take quarantine measures:

- (1) Guidance should be given to livestock keepers focusing on preventing this disease from propagating from the environment and early cleanup at the time of

outbreak thorough daily hygiene management, including disinfection of animal quarters, proper treatment of livestock waste and exterminating animals, including wild rodents and other vectors.

- (2) If cattle are diagnosed with this disease, the necessary measures should be taken, including curing with antibiotics.
- (3) Leptospirosis in dogs is caused by *Leptospira canicola* and *Leptospira icterohaemorrhagiae*. In particular, when there is a risk of domestic animals being seriously affected, guidance should be given to prevent any outbreak of this disease through daily hygiene management and periodic immunizations. In addition, diagnoses in dogs should be made based on a comprehensive judgment of clinical symptoms, the epidemiological status, etc.

## **26 Salmonellosis**

This disease is caused by *Salmonella dublin*, *Salmonella enteritidis*, *Salmonella typhimurium* and *Salmonella choleraesuis* and its outbreak is seen among cattle, pigs and poultry, etc.

### **(1) Cattle**

This disease breaking out occur throughout the whole of Japan, mainly in group breeding/rearing facilities for cattle under or equal to 6 months of age. However, the number of epidemic outbreaks in adult dairy cows has increased. Once such outbreaks occur, the appearance of carrier cattle and environmental contamination mean the affected farm becomes a key source of contamination of this disease, which is damaging to management of the livestock industry and triggers public health issues. In case of outbreak, quarantine measures should be taken, focusing on all efforts to prevent the spread of contamination, clean up the feeding environment, ensure feeding control and block the route of transmission.

- A. Guidance should be given to livestock keepers to prevent outbreaks by daily hygienic feeding control, including cleaning and disinfection of animal quarters, extermination of medical animals, including rodents, prevention of invasion of wild birds and proper handling of animal waste. In addition, inspections of previously affected cattle should be conducted pursuant to the Act to detect carrier cattle and implement subsequent cleanup measures.
- B. When this disease breaks out, guidance should be given to livestock keepers to periodically conduct fecal examinations for all feedlot cattle, detect carrier cattle as well as isolate and breed career cattle with sick. Subsequently, calves may be career cattle for extended periods and fully eliminating *Salmonella* from their bodies with antibacterial agents may be difficult. Enlightenment and guidance should be actively given to relevant parties via antibacterial agents. They should be used after determining drug susceptibility testing isolates whenever possible,

avoiding ongoing administration for extended periods and suppressing expression of drug-resistant bacteria. Guidance on voluntary selection should also be given.

## **(2) Pig**

This disease does not occur frequently among pigs, but epidemic outbreaks often emerge in young pigs at 2-4 months post-weaning age, which often causes great economic loss. It is also an important pathogen of food poisoning symptoms. With these in mind, in case of outbreak, quarantine measures should be taken, focusing on all efforts to prevent the spread of contamination, clean up the feeding environment, ensure feeding control and block the route of transmission.

- A. As the main route of transmission for this disease is the oral ingestion of contaminated fecal matter, when this disease breaks out, isolation, cure or voluntary selection of affected pigs and - if possible - all-in/all-out, the elimination of contamination sources is required. Furthermore, it is important to thoroughly clean and disinfect pigsties and pay full attention to contamination of feed, drinking water, etc. at the same time. In addition, the feces of affected and normal pigs living together and environmental materials should be periodically inspected to ensure cleanup as well as actions for carrier pigs in which disease is detected, depending on medication, isolation and voluntary selection, etc.
- B. Outbreak prevention measures for pigs not only involve disinfection of animal quarters but ongoing ascertainment of the hygiene status of farms introducing pigs, striving to introduce clean pigs, eliminating vectors including dogs, cats and wild birds and thoroughly exterminating diseased animals including rodents. Furthermore, this bacterium tends to be carried by animals. Carrier pigs, which look healthy, continue discharging the bacterium due to stresses caused by a hot or cold environment, close rearing, nutritional disorders, or transport and become fresh contamination sources. To prevent the new discharge of the bacterium, guidance should be given to livestock keepers to focus more closely on feeding controls, including room temperature, humidity and the air condition.
- C. Although administering antimicrobial substances can have a preventive effect to pigs living together, using such substances over-frequently may facilitate multi-drug resistance and bacterial carriage. Enlightenment and guidance should be given to relevant parties to ensure they focus properly on using antimicrobial substances.

## **(3) Poultry**

When this disease occurs in poultry, cleaning up carrier chickens that are infected but do not have the onset of this disease is difficult given the contaminated environment and proper action is needed from a public health perspective. Accordingly, in case of this disease, pursuant to the "Guideline on Hygiene

Measures for Salmonella at Layer Farms” and the “Guidelines on Hygiene Measures at Poultry Housing including Hatcheries,” quarantine measures should be taken as part of cleanup at farms by wholeheartedly striving for daily hygiene management, working to avoid bringing pathogens into farms and periodic disinfection of facilities.

- A. Guidance should be given to livestock keepers at meat-type chicken farms to ascertain the hygiene status in hatcheries, which introduce chickens, to ensure only clean chicks are introduced and conduct Salmonella inspections if chicks are dead or eliminated by natural selection within seven (7) days of introduction. In addition, guidance should be taken to inspect feed and environmental materials at poultry housing and take proper hygiene measures based on the contamination status at chicken farms.
- B. Guidance should be given to livestock keepers to readily dispose of chickens that died of this disease and abnormal chickens while striving to ensure those overseeing rearing eliminate stresses that promote germ discharge.
- C. Guidance should be given to livestock keepers at layer farms to periodically inspect chickens as well as chicks at meat-type chicken farms and take proper hygiene measures based on the inspection results.
- D. Breeding hens should be inspected for pullorum disease and if positive responses emerge, the pathogens should be isolated and identified. Environmental materials in poultry houses should be inspected. As required, dead matter in eggs at the hatching stage, fluff in incubators for eggs or the meconium of chicks should be inspected.
- E. In particular, when infection by serum types caused by egg transmission, including Salmonella enteritidis, has been recognized, guidance should be given to livestock keepers to inspect chickens living together and voluntarily select groups where an infection requiring cleanup has been confirmed.
- F. Chickens which have been vaccinated with Salmonella enteritidis are diagnosed as having positive antibodies at the inspection of pullorum disease. Guidance should be given to livestock keepers to notify a livestock hygiene service center of this vaccination in advance and keep about 1% of chickens flock unvaccinated to differentiate from similar diseases and affix signs to the chicken flock.

## **27 Bovine campylobacteriosis**

Quarantine measures against this disease should be taken focusing on inspections of this disease as well as those pursuant to the provision of Act on Improvement and Increased Production of Livestock, centering on breeding cattle and those living together and maintaining a clean environment.

- (1) If bulls are diagnosed as having this disease, their shared use as breeding stock should be immediately stopped and all necessary quarantine measures taken, including cures. Even if they are diagnosed as negative later, follow-up investigations on the bulls should be conducted accordingly to confirm they remain negative. Completely obliterating this bacterium from the preputial cavity is often difficult and in the absence of any therapeutic effect, guidance on voluntary selection should be given.
- (2) In case of cows diagnosed with this disease, guidance should be given to take necessary measures, including isolation breeding or treatment and epidemiological studies should be conducted based on mating records.

## **28 Neosporosis**

This is one of the diseases that causes miscarriage among cattle. Quarantine measures should be taken, focusing on voluntary selection or isolation rearing of mother cows that experience miscarriage and cattle with positive antibodies in consideration of the outbreak of abnormal labor and the prevalence of antibodies.

- (1) Guidance should be given: fetuses should be pathologically examined to obtain a definitive diagnosis and potential infection sources, including fetuses and the placenta, should be promptly disposed of.
- (2) Guidance should be given to prevent pets and wild animals into invading animal quarters and their facilities and the latter should be disinfected where any outbreak of this disease has occurred, including through hot water sanitization.
- (3) Guidance should be given to introduce antibody-negative cattle and implement embryo transfer only for the same.

## **29 Hypodermosis**

This disease breaks out in cattle imported from North America and cattle living together. Quarantine measures should be taken, focusing on detecting and preventing this disease by inspecting cattle imported from contamination areas.

- (1) When importing cattle from areas contaminated with this disease, observations should be made to see whether they have any tumor, ranging in size from a walnut to a pigeon egg. If such tumor emerges, the mite body should be checked to verify the pathology. Guidance should be given to periodically conduct such observation during import inspection and from the first winter to early summer. It is important to discover this disease early and prevent propagation when gadflies emerge from the pupae.
- (2) Guidance should be given when the outbreak of this disease is confirmed: secondary causes should be prevented by removing larvae through some

surgical procedures or fingertip pressure and conducting spot inspections of all cattle, including those affected, once a month pursuant to the provision of Article 51 of the Act until August following the discovery and larvae should be removed from the feedlot cattle as required.

- (3) If gadflies seem to have emerged from pupae at the time of discovery, there is a need to prevent any outbreak by investigating surrounding farms within a radius of 5 km or so from the affected and relevant farms.
- (4) It is necessary for farms to promptly notify the relevant prefectural government if they find that cattle relocated from an affected farm seem infected. The prefecture having received such notification must take necessary measures pursuant to the provision in (1).

### **30 Equine influenza**

Once it breaks out occurs, this disease rapidly disseminates and causes serious damage. Quarantine measures should be taken, focusing on preventing outbreak by immunization.

- (1) Enlightenment and guidance should be actively given to relevant parties to strictly carry out immunization for all horses.
- (2) When receiving a report that respiratory symptoms were recognized in a group of horses, this is the suspected disease. Spot inspections should be promptly conducted as required and guidance given to livestock keepers to isolate and breed the horse group and avoid contact with others until the inspection results are revealed.
- (3) When this disease is suspected, inspections are conducted and the results revealed, prefectures should promptly report to the Animal Health Division. When this disease is determined, measures should be taken to isolate the affected horses and thoroughly disinfect horse barns. On this occasion, affected horses shed the virus for some time after defervescence and can be a source of infection. Accordingly, guidance should be given to livestock keepers to continue isolating them until they recover completely from respiratory symptoms, including coughing and nasal discharge.
- (4) As the virus of this disease tends to change its antigenicity, in some cases, it can be assumed that existing vaccines are insufficient. To help prevent the outbreak effectively, there is a need to isolate the virus in pathological appraisals and promptly send or bring pathological appraisal materials to NIAH to identify the antigenicity of the isolated virus.

### **31 Equine rhinopneumonitis**

This disease causes a miscarriage at the time of outbreak and considerable damage to production sites. The pathogen itself has also been widely distributed over Japanese horse-breeding centers. Affected horses carry the virus, the symptoms of which subsequently emerge due to stress. Quarantine measures should be taken in production sites, focusing on preventing miscarriage by ensuring general hygiene management and conducting immunization as necessary.

- (1) Guidance should be given to livestock keepers to prevent infection caused by this viral disease by ensuring measures including avoiding contact with other horses as much as possible in late pregnancy as well as strictly enforcing diagnosis of early pregnancy, constantly endeavoring to maintain health, strengthening pregnant horses and improving resistive force against various forms of sensitization. There is also a need for guidance to implement immunization when required.
- (2) When mating a brood mare in an area free of any outbreak with a breeding stallion from an area where an outbreak has occurred, guidance should be given to livestock keepers to isolate and breed the mare where possible until the delivery season in the area is over.
- (3) If miscarriage occurs and the reason is unknown, a pathological appraisal should be promptly conducted assuming this disease may be the cause. Guidance should be given to livestock keepers to ensure any horse that experiences a miscarriage should be isolated and disinfection conducted. Aborted fetuses and placenta should be properly disposed of after collecting pathological appraisal materials.
- (4) If horses are infected or suspected of being infected, the following guidance should be given to livestock keepers: they should be isolated where possible until the delivery season in the area is over, horses living with them should not be moved outside until the delivery season in the area is over and those who may propagate the virus of this disease, including visitors, are forbidden to enter the site of the outbreak.

### **32 Tularemia**

This disease is one of zoonoses, with outbreaks among humans confirmed in Tohoku, Kanto and Hokkaido regions, etc. Causative organisms of this disease are epidemiologically and biochemically classified into A and B types. Outbreaks of A type, which has a stronger pathogenicity for humans, are limited to North America, while in Japan, the B-type strain is isolated from humans. While the distribution in animals and outbreak status of this disease in Japan remain unclear, the outbreak in humans is confirmed. There is a need to establish close cooperation with public health agencies

and ascertain the existence. In confirming the outbreak of this disease in domestic animals, efforts should be made to identify the infection sources by conducting inspections on arthropods (ticks, tabanids, etc.), host animals (particularly hares) and the environment (particularly water) in the area and guidance should be given to livestock keepers to take measures including cutting the infection route to prevent the invasion and spread of this disease.

### **33 Contagious equine metritis**

This disease causes infertility in horses. Once it prevails through mating, etc., cleaning up is difficult and it results in extensive damage. Quarantine measures should be taken; focusing on efforts to promote cleanup through cures of infected and carrier horses detected in continuous periodic inspections and inspections for this disease.

- (1) Guidance should be given to livestock keepers: in confirming whether they find any abnormality in breeding mares or stallions before mating, if the following observations are recognized, infection with this disease is suspected, no mating among the animals concerned should take place and the details should be promptly reported to a livestock hygiene service center for pathological appraisal.
  - A. Breeding stallion  
If the conception rate of mated brood mare is abnormally lower than normal years or other breeding stallions.
  - B. Brood mare
    - (a) Gray-white mucus is discharged from the vulva or contaminates the pudendal region or tail.
    - (b) An abnormal estrus is recognized, including an abnormally short estrous cycle.
- (2) Guidance should be given to livestock keepers to ensure disinfection of external genitalia and their vicinity in breeding stallions and brood mares as well as the hands and fingers of persons who touch them before and after mating for each horse.
- (3) Inspections should be conducted for this disease, including clinical and bacteria examinations, for horses in categories A to C below:
  - A. Breeding stallions and brood mares breeding in an area where this disease has broken out (tests to be conducted before the breeding season)
  - B. Breeding stallions or brood mares transported from an area where this disease has broken out for mating, where inspection results for this disease for mating are unknown (inspections conducted prior to mating)
  - C. Horses that are reported in a prefectural outbreak as epidemiologically related to other equine carriers of this disease (inspections conducted in each case)

- (4) Guidance should be given to livestock keepers, not only to make clinical observations after the breeding season starts but also to promptly inspect breeding stallions and brood mares in outbreak areas besides inspections in (3) above when any abnormality is recognized. In particular, breeding stallions can be important propagation sources if infected with this disease. There is a need for enlightenment and guidance to livestock keepers to periodically conduct inspections.
- (5) Guidance should be given to livestock keepers to isolate carrier horses immediately after detection, promptly cancel mating if such detection was conducted during mating and take thorough measures to recover fully through periodic inspections and therapy with effective medicaments. In addition, for horse barns where carrier horses are fed, guidance should be given to livestock keepers to prevent propagation by disinfecting the hands and fingers of persons overseeing the horses, setting out dedicated tools and instruments and ensuring repetitive disinfection of stalls, straw mulching and other contaminated objects.

### **34 Equine paratyphoid**

Although this disease has been nationally declining in recent years, outbreaks still occur, mainly in production sites. Affected horses, with *Bacillus* present topically and in bone marrow even after symptoms subside, can be carrier horses. Accordingly, if this disease emerges, there is a need to take quarantine measures that emphasize early detection of affected horses, voluntary isolation of such horses and thorough therapy.

- (1) In production sites, affected horses should be detected through inspections based on the Act at an early stage. Effective inspections should be conducted using surplus serum in equine infectious anemia inspections.
- (2) If the affected horses are promptly isolated and given supportive measures, including administration of immune serum while measures are taken to prevent propagation by thorough disinfection, but full recovery still seems difficult, guidance on voluntary selection should be given to livestock keepers. In addition, it is important to assess horses living together, confirm whether they are infected and strive to prevent outbreaks.
- (3) It is likely that affected horses will become carriers. There is a need to periodically conduct inspections for the time being, even after symptoms disappear and strive to ascertain the status. Guidance should be given to livestock keepers to ensure hygienic feeding controls, including isolation of horses that are affected from others and strict enforcement of disinfection during the time.

### **35 Contagious ecthyma**

This disease triggers skin and mucosal lesions, including papules, abscesses, ulcers and crusting on the nose, surrounding the mouth and in the oral cavity, sometimes facial, four limbs and is a zoonoses that affects papilla, sheep, goats and serow, as well as humans and the outbreak occurs in countries worldwide including Japan. This disease often occurs in young sheep from late summer to winter. The incidence of disease is as high as 100% while the mortality rate is several percent and the prognosis is generally more positive. However, in some severe cases, symptoms including exothermic responses, weakness, weight loss, feeding difficulties and secondary infections were observed and caused considerable economic damage.

In addition, this disease may spawn symptoms critically similar to foot-and-mouth disease, underlining the need to differentiate it from the latter. If a domestic animal is found with suspected symptoms of this disease, after properly ascertaining the clinical symptoms and the status of the epidemiological spread, it should be differentiated from foot-and-mouth disease and others. If the clinical epidemiologic differentiation is difficult, the status should be reported to the Animal Health Division immediately and measures taken pursuant to the Specific Domestic Animal Infectious Disease Quarantine Guidelines.

- (1) In the event of any outbreak of disease suspected of coming into this category, a settled diagnosis should be conducted, including differentiating it from similar diseases pursuant to the Pathological Appraisal Guidance.
- (2) This disease propagates through direct and indirect contact infections, wound infections, or oral infections. Guidance should be given to livestock keepers to avoid contact with affected animals and contaminated tools and materials during grazing, milking and feeding. Besides, humans may be infected through contact with affected animals, hence the need for proper measures in clinical inspections and during collection of diagnostic means.
- (3) The causative virus is highly resistant to drying. Guidance should be given to livestock keepers to ensure that contaminated raising facilities are disinfected, affected animals isolated from healthy ones, secondary infection prevented and the general hygiene status improved.
- (4) It is important to dispose of carcasses promptly and appropriately to prevent contamination of soil and the environment and secondary infection to domestic animals living together.

### **36 Toxoplasmosis**

As an epidemic of this disease causes considerable damage, the livestock industry and public health industries prioritize quarantine measures. In case of this disease, as medical animals are key infection sources, hygiene should be managed, focusing on

the extermination of medical animals and quarantine measures taken; emphasizing the prevention of outbreaks by exterminating infection sources and administering antimicrobial substances if required.

- (1) Cats are an oocyst excretion source and other medical animals are deeply involved in its transportation. Guidance should be given to producers to avoid rearing cats in farms and striving to thoroughly remove other medical animals.
- (2) Oocyst, which is a general infection source, is highly resistant to commonly used antiseptic and chemical agents, but not heat. It is important to give guidance to livestock keepers in the regions worst affected by the disease to conduct thermal disinfection by steam cleaners.
- (3) Surveys on antibodies should be implemented with a focus on breeding pig farms in regions where this disease causes considerable damage. Guidance should be given to livestock keepers to conduct voluntary selection of pigs with positive antibodies; taking into consideration past damage in pigsties and their medical history.

### **37 Aujeszky's disease**

Nationally, the cleanup of this disease is being developed while in some regions, pigs infected with field viruses and wild boars with an antibody against this virus were confirmed. Accordingly, guidance should be given to relevant parties to ensure countermeasures against wild animals pursuant to the Standards of Rearing Hygiene Management in Article 12-3 of the Act as well as properly taking quarantine measures to maintain cleanup (promotion of cleanup in regions where pigs infected with a field virus are confirmed) pursuant to the "Outline of Aujeszky's Disease Quarantine Measures" (Notification of the Director-General, Livestock Industry Bureau, MAFF dated March 22, 1991, 3-ChikuA-431).

### **38 Transmissible gastroenteritis**

Once this disease breaks out, it propagates to all pigs in the same sty. In particular, if a piglet is infected, the incidence of disease and mortality rate are extraordinarily high. Accordingly, quarantine measures for this disease should be taken to ensure general hygiene management, implementing immunization as required and a rapid response to the outbreak, focusing on preventing harm to piglets.

- (1) In general, this disease develops into an acute form. It is important to enlighten people on symptoms of this disease to ensure proper quarantine and loss prevention. In addition, guidance should be given to livestock keepers to ensure early notification of this disease pursuant to the provision of Article 4 of the Act and immediately take subsequent measures.

- (2) Affected pigs should be promptly isolated from healthy pigs. To prevent symptoms from worsening due to intercurrent bacterial infection, including fecal bacteria, guidance should be given to livestock keepers to administer antibacterial agents and ensure pigsties where the outbreak occurred and their feeding control tools are thoroughly disinfected. Besides, even if symptoms have disappeared, pigs still excrete the virus. Guidance should be given to livestock keepers to refrain from moving the pig in terms of preventing propagation.
- (3) In the cleanup guidance when this disease always exists, there is a need to give guidance to livestock keepers to focus more closely on immunization, disinfection and stress-reduction measures through the daily hygiene feeding control as well as use all-in/all-out-system feeding control where possible.

### **39 Porcine reproductive/respiratory syndrome**

In the past outbreak cases of this syndrome, some respiratory symptoms and abnormal labors were round, but in many cases, there were inapparent infections and the infection persisted both in individual animals and groups. Many factors make quarantine measures difficult. Accordingly, in case of this syndrome, guidance should be given to livestock keepers to take the following measures to prevent loss through thorough rearing hygiene management measures as well as effectively using vaccines as required:

- (1) As the virus of this disease is sometimes carried by introduced pigs, materials and equipment, vehicles, humans, etc., when introducing them, sufficient consideration should be paid to prevent the invasion of the virus.
- (2) Respiratory symptoms often occur under the influence of breeding status, hygiene environment, management state, stress, etc. The environment in the animal quarters, including ventilation, temperature and humidity, should be improved and overcrowded breeding should be prevented. At the same time, the hygiene of the rearing management should be considered to prevent secondary infection because respiratory symptoms often worsen through the secondary infection, including bacteria. If an outbreak is recognized, loss should be prevented by drug susceptibility tests and proper usage of antimicrobial substances.
- (3) As the virus of this disease is highly likely to be ever-present, it is important to improve the breeding environment by ensuring thoroughly disinfected animal quarters in such cases. Besides, as the virus is likely to exist and feed on post-weaning breeding sows/fattening pigs, early weaning, rearing isolated from weaned pigs, entry and exit of breeding sows/fattening pigs should be monitored empty pigsties thoroughly disinfected.

#### **40 Porcine Epidemic Diarrhea**

Measures to prevent outbreaks and spread of this disease should be taken as per the “Manual for Quarantine against Porcine Epidemic Diarrhea (PED)” (Notification by Director-General, Food Safety and Consumer Affairs Bureau, MAFF, 26 Shoan No. 3377 dated October 24, 2014).

#### **41 Atrophic rhinitis**

In case of this disease, quarantine measures should be taken with emphasis on infection prevention and critical prevention of day-old pigs through measures including hygienic control on a daily basis, proper immunization and administration of antimicrobial substances.

- (1) If baby pigs are infected with this disease by mother carriers during lactation, they develop severe symptoms. Guidance should be given to livestock keepers to ensure cleaning and disinfection of pigsties where such pigs were born in contaminated farms, immunize pigs so that they can obtain sufficient immunity at least during this period and combine administration of antimicrobial substances when necessary.
- (2) If a pig shows apparent symptoms of this disease, it is important to promptly conduct voluntary selection because it may be an important infection source. Guidance should be given to livestock keepers to promote cleanup in the all-in/all-out system where possible, because pigs living together may be infected.

#### **42 Swine erysipelas**

The spread of immunization has seen the number of acute this disease breaking out decline, but chronic cases, including endocarditis and arthritis, are reported mainly from slaughtering inspections. These are often attributable to insufficient immunization because the affected pigs were not immunized as piglets before the maternal antibody value declined below a certain level. Quarantine measures should be taken, focusing on proper immunization of piglets.

- (1) In endemic areas of this disease, guidance should be given to livestock keepers to help prevent any outbreak, mainly by proper and effective immunization after ascertaining when the maternal antibodies of the piglets disappear.
- (2) In case this disease breaks out, guidance should be given to livestock keepers to prevent loss through early therapy using antimicrobial substances.
- (3) In case of death caused by acute symptoms, pathological appraisals should be conducted, particularly when differentiating it from similar diseases from classical swine fever.
- (4) It is important to dispose of carcasses promptly and appropriately to prevent

contamination of soil and the environment and secondary infection of pigs living together.

#### **43 Swine dysentery**

This disease tends to see productivity plummet because once an outbreak occurs, the disease tends to be always existing as well as causing developmental delay and feed efficiency to decline. There is also a need to take quarantine measures emphasizing ways to prevent the pathogen of this disease invading farms and disinfection because no vaccine has been developed.

- (1) Guidance should be given to livestock keepers to take all possible measures to prevent pigs from being introduced to contaminated areas that may carry the virus and the entry and transportation of vehicles and articles likely to be contaminated and immunize them.
- (2) It is appropriate to administer antimicrobial substances to affected pigs, but the ideal cleanup approach is to establish quarantine measures by combining an all-in/all-out system and disinfection. It is important to ensure all livestock keepers understand this. Guidance should be given to the pig farms worst-harmed by this disease to take cleanup measures based on voluntary selection.

#### **44 Avian influenza**

Avian influenza, as stipulated in Article 2 of the Ministerial Ordinance, is other than infectious diseases in domestic animals: “highly pathogenic avian influenza” and “low virulence avian influenza.” There is a need to take quarantine measures, focusing on thorough hygienic feed controls to prevent any outbreak of this disease and exacerbated damage caused thereby.

- (1) Advice and guidance on this disease should be given to livestock keepers about the health observation of breeding chickens, invasion of wild birds into poultry houses, prevention of access to water supply sources, restrictions on comings and goings to/from farms, thorough disinfection and the prevention of Newcastle disease, which is similar.
- (2) If the outbreak occurs in a general chicken farm, as well as isolating and voluntarily selecting affected chicken groups from an early stage, complete disinfection per chicken group and thorough classification of administrators and tools should also be conducted. Guidance should be given to livestock keepers to ensure a three (3)-week period of empty houses as a rule.
- (3) If the outbreak occurs in a breeder chicken farm (including hatcheries), hatching should be suspended. As well as voluntary early selection of affected chickens, complete disinfection per chicken group and thorough classification of

administrators and tools, three (3) weeks of empty farms are also required as a rule. Guidance should be given to livestock keepers to supply stored and produced eggs after processing them via measures that will not spread pathogens of this disease.

- (4) If this disease breaks out and hatching is temporarily suspended, guidance should be given to resume sales after observing chicks produced from hatching eggs collected after the egg-laying resumption for 3 - 4 weeks and confirming no recurrence.

#### **45 Avian pox**

This disease propagates through bloodsucking insects as mediators, contact and splash among chicken flocks. As prevention measures are based on applying vaccines, guidance should be given to livestock keepers to confirm the efficacy of said vaccine by seeing whether the pox breaks out one week after vaccination as well as vaccinating based on a proper program so that chickens are sufficiently immunized by summer when vector insects appear. Guidance should be given to livestock keepers to strive for hygiene management, including extermination of bloodsucking insects such as mosquitoes, bird lice and ticks, prevention of scattered dust and fecal waste and strictly enforced disinfection.

#### **46 Marek's disease**

In case of this disease, there is a need to give guidance to livestock keepers to take quarantine measures, emphasizing guidance on immunization of poultry and isolation rearing during the starter period.

- (1) Guidance should be given to livestock keepers to focus on hatching hygiene as well as properly immunizing produced chicks.
- (2) There is a need to give guidance to livestock keepers to introduce immunized chicks in general chicken farms.
- (3) The younger baby birds are, the more susceptible they are to this disease. Accordingly, guidance should be given to livestock keepers to ensure isolation rearing during the starter period or thorough all-in/all-out and prevent infection during this time.
- (4) Guidance should be given to livestock keepers to ensure early detection of affected chickens and voluntarily select them at an early stage. In particular, if this disease breaks out in any immunized chicken group, guidance should be given to take necessary improvement measures for the feeding environment and the inoculation method as well as focusing on the influence of maternal antibodies, intervention of a disease causing infectious bursal disease or the development of

any strongly pathogenic strain while investigating the cause of the outbreak.

#### **47 Infectious bronchitis**

In this disease, quarantine measures should be taken with emphasis on thorough immunization in a well-planned manner as well as general hygiene management.

- (1) For quarantine, this disease nationally spreads with relatively strong transmissibility. Guidance should be given to livestock keepers to ensure prevention of any outbreak by strictly enforced immunization. On this occasion, advice and guidance should be given so that a proper vaccine can be selected suitable for the epidemic virus strain because there are various serum types of the pathogenic virus of this disease. If necessary, inspections including virus isolation should be conducted for a serum type of the epidemic virus strain in the chicken farm.
- (2) Investigation should be promptly conducted to confirm whether a poultry house having suffered an outbreak has promptly conducted immunization. If so, the outbreak may be caused by a field virus in vaccine with a serum type that is not a suitable virus antigen. Advice and guidance should be given to promptly inspect the serum type of isolated virus, etc. and select a proper vaccine. If any strain other than conventional serum types is isolated or such strain is likely to exist, prompt reporting is required.

#### **48 Infectious laryngotracheitis**

Once invasion occurs, this disease tends to remain. Guidance should be given to livestock keepers to take quarantine measures, focusing on maintaining cleanup by thoroughly taking measures to prevent a virus invading the cleanup area, preventing losses through immunization and striving to achieve cleanup through the all-in/all-out system in the contaminated area.

- (1) Once this disease invades a farm, unless quarantine measures are taken in the all-in/all-out system, virus carriers remain and cleanup is difficult. Accordingly, guidance should be given to livestock keepers to take all possible preventive measures to prevent pathogens of this disease from invading farms by restricting the following: the introduction of chickens suspected of carrying the virus from contaminated areas and the entry and transportation of vehicles and articles likely to be contaminated.
- (2) The all-in/all-out system is the most effective way to prevent the virus of this disease from existing if the outbreak occurs. However, if the local contamination status and breeding scale hamper implementation of the system, guidance should be given to livestock keepers to strive to prevent losses using immunization. As this disease tends to always exist, enlightenment and guidance should be given,

also reflecting the importance of conducting immunization.

- (3) Guidance should be given to relevant parties to take proper measures at the time of immunization in the cleaned area, with the outbreak status and breeding state in the surrounding area taken into consideration as well as complying with the use of immunization.

#### **49 Infectious bursal disease**

There is a need to take quarantine measures; focusing on proper immunization and thorough hygienic feed controls to prevent wider damage caused by the outbreak of this disease and others that occur in succession induced by such outbreak.

- (1) The outbreak of this disease seems closely connected to the loss of general feeding control, including the deterioration of the feeding environment. Guidance should be actively given to livestock keepers regarding the development of the feeding environment by measures including the cleanup of poultry housing, disinfection using effective drugs and ensuring poultry houses remain empty for the required time.
- (2) Guidance should be given to relevant parties to focus on the emergence of strains with strong pathogens, ensure breeding hens and chicks are immunized against this disease and properly immunize chicks, taking the influence of the maternal antibody into consideration.
- (3) Guidance should be given to livestock keepers to early detect chickens that develop symptoms and realize early voluntary selection as well as remove stresses to the greatest extent possible. Furthermore, guidance should be given to livestock keepers to review the immunization program in the farm if this disease breaks out in spite of the implementation of the immunization. When any difference from the conventional disease is suspected, efforts should be made to isolate and identify the virus to determine its pathogenicity.

#### **50 Avian leukosis**

No vaccine exists for this disease. To prevent horizontal infection during the starter period, there is a need to provide guidance to livestock keepers for thorough daily hygiene management, including disinfection, as well as introducing breeding hens and hatching eggs in accord with the past leukosis outbreak status.

#### **51 Avian tuberculosis**

This disease used to spread almost worldwide but has declined due to modern feeding controls. Moreover, almost no outbreak of this disease in Japan has been reported and it appears to be an overseas infectious disease. However, recent years

have seen outbreaks among exhibited animals and imported birds and no effective therapy exists. Once the outbreak occurs, this disease can damage the poultry industry severely. Therefore, guidance should be given to livestock keepers to refrain from introducing seed and other chickens from infected chicken flocks. It is also necessary to give guidance to livestock keepers to take necessary quarantine measures such as voluntary selection for all flocks, disinfection of the inside of poultry houses and avoid using them for a long time.

## **52 Avian mycoplasmosis**

In case of this disease, quarantine measures should be taken with an emphasis on thorough hygienic feeding control daily and the prevention of outbreak by immunization.

- (1) It is important to give guidance to livestock keepers to thoroughly conduct general hygienic feeding control. There is a need to give guidance to strive for voluntary natural selection of carrier chicken flocks. Moreover, this disease propagates through egg transmission. Guidance should be given to livestock keepers to refrain from using hatching eggs of carrier chicken flocks until the cleanup has been confirmed.
- (2) If spot inspections are conducted as required, pursuant to the provision of Article 51 of the Act to ascertain the outbreak status and suspicion of this disease arises, guidance should be given to livestock keepers to take proper measures, including isolation of affected chickens, voluntary isolation, therapy and disinfection of poultry houses as well as pathological appraisal, to be promptly conducted. Proper guidance should also be given for necessary measures based on the results.
- (3) If symptoms appear in breeder chicken farms, all chickens at least per flock (the minimum gauge unit) should be inspected and antibody-positive chicken flocks voluntarily selected and if there is a need to prevent secondary infection, antimicrobial substances should be administered for cleanup.

## **53 Leucocytozoonosis**

In case of this disease, quarantine measures should be taken with an emphasis on countermeasures against vectors before an epidemic period and the administration of antimicrobial substances, etc. as required.

- (1) Guidance should be given to livestock keepers: to exterminate *Culicoides arakawae*, a vector of this disease, pesticides and repellent (hereinafter referred to as "pesticides, etc.") should be sprayed on chicken bodies and poultry houses in a well-planned manner and insects should be captured by mosquito repellents. On this occasion, grasses and barns in poorly ventilated areas around poultry

houses can encourage *Culicoides arakawae* Arakawa. It is important to provide guidance on how to remove them thoroughly and extermination by spraying pesticides, etc. There is also a need to give guidance to place windows and air vents in higher locations to prevent *Culicoides arakawae* Arakawa from invading if a new poultry house is set up.

- (2) Guidance should be given to livestock keepers on how to apply pesticides, etc., effectively: non-tensioactive liquid agent or oleum on columns, walls, etc. of poultry houses and powder or liquid agent on barns, grasses and shades depending on the situation.
- (3) If the outbreak risk is particularly high, guidance should be given to livestock keepers to administer proper antibacterial agents, including a restriction on usage and a withdrawal period.
- (4) In quarantines provided in (1)-(3), proper understanding of small outbreaks at an early stage in the region is quite effective to prevent this disease later. As required, it is important to select the required farms from poultry farms in a rice paddy area or in an area where the outbreak of this disease occurred and inspect them before a huge outbreak of *Culicoides arakawae* Arakawa and prevent this disease breaking out by detecting antibodies from chickens that have not passed summer season or sporozoite from the body of *Culicoides arakawae* Arakawa.

#### **54 Varroosis**

This disease is caused by parasitism of varroa mites on the body surfaces of larvae of bees, pupae and adult bees. Once such outbreak occurs and the disease is established, damage will proliferate. Guidance should be given to livestock keepers to introduce honey bees from cleaned groups as well as taking quarantine measures, focusing on identifying the causes, acaricidal and improving hygiene management, including secondary infection control if there are some suspected cases of infection with this disease.

#### **55 Chalkbrood disease**

This disease infects and kills larvae and debilitates a bee colony - even annihilating it in severe cases. Moreover, this disease has been widespread among honeybee groups in Japan since 1980. Quarantine measures should be taken; focusing on introduction from cleanup groups, early detection in clinical inspections and frequent disinfection with effective drugs.

- (1) To prevent any outbreak of this disease, advice and guidance should be given to livestock keepers to ensure daily hygiene controls, including their observation of inside or outside beehives and disinfection of tools and avoiding any placement of beehives in humid and poorly ventilated places.

- (2) This disease often breaks out from spring to early summer and in mid-autumn. It is important to enlighten livestock keepers to exercise feeding controls to keep honeybee groups healthy during the time.
- (3) If an infected brood (mummy) is found, combs, the inside and outside of the beehive and the whole honey bee area should be disinfected, efforts should be made to prevent infection in the area and selection should be conducted as required.

### **III Others**

#### **1 Disaster management**

- (1) For countermeasures against infectious diseases in domestic animals during wind, flood damage or earthquakes, there is a need to establish a system to secure antiseptic substances and vaccine and prepare effective plans, including a system to dispose of dead domestic animals in advance, given the past outbreak status of infectious diseases to handle situations flexibly and commensurate with the actual state of disasters.
- (2) An overview of damage to domestic animals should be promptly reported in a format specified in the “Procedure of Preparation of Report on Damages in Agriculture, Forestry and Fisheries Industry” (Notification of Vice Minister of Agriculture dated May 21, 1973, 48-So No. 382). Therefore, this report should be strictly carried out.

## Appendix 1

### **Guidance on Monitored Infectious Disease Surveillance Measures**

The number of outbreaks of major acute infectious diseases in domestic animals has declined more than ever before, but the damage is expected to intensify and penetrate further once any outbreak occurs due to more widespread and intensive business in the livestock industry and the advent of motorization in recent years. Accordingly, there is a need to fully determine the geographic and temporal distributions of infiltration conditions per disease, issue early warnings in the event of increasing risk, properly prevent any outbreaks, implement measures to prevent spread and take quarantine measures for cleanup. In addition, there is a need to implement further epidemiological investigations to identify the source of outbreaks and contribute to proper quarantine measures.

Accordingly, proactive quarantine measures should be established by setting these guidelines, promptly and properly ascertaining actual status of epidemic from the outbreak status per disease and search results of pathogens and returning necessary information immediately to contribute to effective and proper quarantines against these diseases.

#### **1 Definitions**

In this guideline, “surveillances” mean measures taken to continuously collect, analyze and evaluate the information as required on the outbreak conditions of monitored infectious diseases during a certain period and in a certain area, antibody possession status, searching pathogens and geological distributions based on inspections to ascertain the occurrence conditions and trends to prevent monitored infectious disease and forecast the outbreak.

#### **2 Surveillance implementation areas and related diseases**

The surveillance should classify geological areas into national and local respectively, taking the pathology of monitored infectious diseases, outbreak status, geological distributions and need for quarantine measures for this disease into consideration.

The Animal Health Division will formulate details of inspection methods to implement them by working with NIAH and other relevant organizations and specialists in relevant areas and the Director of the Animal Health Division will notify them individually to ensure thorough implementation.

##### **(1) Nationwide surveillance**

- A. Nationwide surveillance is conducted, aiming to help establish a nationwide quarantine system with the national government determining which information should be understood on a nationwide and wider geographic scale in a concentrated manner when the disease spreads beyond prefectural areas and damages the livestock industry.

- B. The government of Japan selects the following as diseases under the nationwide surveillance that require implementation according to national unified standards, including nationwide cleanup confirmation and wide-area epidemic disease forecast from diseases that have a key impact on domestic animals, including showing strong transmissibility and prevailing styles of occurrence: [1] diseases to be eradicated; [2] monitored infectious diseases, the outbreak of which has not yet been reported in Japan (monitored infectious diseases listed in the left-hand columns of Table, Article 10, paragraph 1 item 1 of the Ministerial Ordinance. Hereinafter referred to as the “overseas infectious disease.”); [3] arthropod-borne viral infections in monitored infectious diseases for which the outbreak has been reported in Japan (monitored infectious disease in the left-hand column of Table of Article 10 paragraph 1 item 2. Hereinafter referred to as the “arbovirus infection.”); and [4] monitored infectious diseases for which the outbreak has been reported in Japan (monitored infectious disease other than those in the left-hand column of Table of Article 10 paragraph 1. Hereinafter referred to as “domestic infectious diseases”).

## **(2) Regional surveillance**

- A. A regional surveillance should be conducted to help establish a local quarantine system by getting the prefectural government to determine the outbreak status of monitored infectious diseases and the antibody retention status.
- B. Prefectures select the following diseases for regional surveillance taking pathology and the geographical situation into consideration and based on community conditions: [1] domestic infectious diseases, which repeatedly prevail regionally; [2] domestic infectious diseases which always exist in certain areas.

## **3 Surveillance implementation procedure**

In implementing the surveillance, the following procedures should be followed to focus on the basic items below for smooth promotion: [1] setting the surveillance implementation purpose, [2] developing a surveillance implementation plan, [3] implementing an inspection, [4] reporting inspection results, [5] aggregation of inspection results, [6] analysis and evaluation of aggregated results and [7] information feedback.

### **(1) Setting of surveillance implementation purposes**

- A. In implementing the surveillance, there is a need to clearly show the purposes for which the outbreak status and progress of the monitored infectious diseases needs to be ascertained to parties interested in surveillance implementation, including domestic animal owners, livestock hygiene service centers, prefectural livestock divisions in charge and the Animal Health Division.
- B. Furthermore, when an inspection order is issued pursuant to the provision of

Article 5 of the Act, there is a need to notify items stipulated in the Act, including the purpose of implementation and the area subject to be implementation pursuant to the procedure stipulated in the Ministerial Ordinance.

**(2) Points to remember in formulating and implementing a surveillance implementation plan.**

In formulating and implementing a surveillance plan, it is important to focus on the following points:

- A. Simplify overall surveillance and configurations (procedures) as far as possible to facilitate implementation.
- B. Enhance flexibility when implementing surveillance. Improve the surveillance through feedback/opinions from surveillance institutions.
- C. Parties interested in the surveillance implementation can easily understand and in collecting data and providing information, the importance of the roles of the relevant parties and organizations are clearly recognized.
- D. Types of data to be collected and the definition of diagnosis criteria.
- E. A sampling method should be selected so that the results of the surveillance implementation represent a population and no error should occur depending on the livestock hygiene service center overseeing implementing the inspection.
- F. Measures should be promptly conducted at stages from data collection to implementation of measures.
- G. Data should be collected regularly according to the nature of disease to understand the temporal distribution.

**(3) Concepts upon implementation of inspections**

Inspections to ascertain the outbreak status of monitored infectious disease are essential when it comes to surveying infectious diseases and ensuring suitable methods may help guarantee their success. Accordingly, it is important to focus more closely on the following basic points and implement inspections in the most suitable way.

- A. Basic framework on inspections of domestic infectious diseases
  - (a) In setting areas subject to implementation, focus sufficiently on the transmissibility of diseases, the outbreak status of diseases, the breeding status of Livestock, etc., select areas suitable for the inspection purpose and give consideration to understanding of the status of the whole population where possible.
  - (b) During inspection, a suitable sample extraction method and an inspection method should be selected in accordance to the goal.

A method using a random number table must be used to extract samples very accurately so that the characteristics of the population can be guessed.

- (c) If outbreaks of a disease occur through a year, set an inspection implementation date around the period when domestic animals are most likely to be exposed to pathogens, taking the hygiene status in adjacent areas and the movement status of domestic animals into consideration. If outbreaks of a disease vary depending on seasons, set a date around an occurrence period.

#### B. Basic framework on inspections of overseas infectious disease

- (a) Inspections of overseas infectious disease are targeted at diseases for which no outbreaks have occurred in Japan. When it is determined that the risk of overseas infectious disease increases in Japan, spot inspections and investigations including feedback should be implemented to detect the overseas infectious disease and confirm cleanup.
- (b) The Animal Health Division should communicate closely with other relevant agencies to aggressively collect information on overseas infectious diseases.
- (c) When the risk of an overseas infectious diseases breaking out increases in Japan and there is deemed to be a need for surveillance, the Director of the Animal Health Division shall notify the details, including surveillance implementation methods.

#### C. Basic framework on arbovirus infection

- (a) The inspection of arbovirus infections is conducted mainly to ascertain the movement of pathogens by the fluctuation of antibody values in blood and forecast prevalence at an early stage.
- (b) The arbovirus infection is transmitted by arthropods. Once it breaks out, this disease generally spreads beyond prefectural borders and inspections should be implemented according to national unified standards.

### **(4) Result report, aggregation and feedback information**

- A. The results of inspections should be reported and collected in writing as well as effectively reported and collected using electronic media.
- B. As required, information on epidemiological characteristics, infection source, route of infection and property of pathogen shall be collected as required and if any environmental factors are related, including temperature and humidity and the epidemic, information on regional environmental factors shall be actively collected.
- C. In providing feedback on the information, there is a need to fully consider the privacy lest personal information should be divulged.
- D. The livestock hygiene service center, prefectural livestock divisions in charge

and the Animal Health Division should play the following roles in reporting results and collecting and aggregating information:

(a) Livestock hygiene service center

The livestock hygiene service center shall send or electronically transfer the information obtained in inspections during the inspection period unit to the prefectural livestock divisions in charge in writing, by fax, email, etc. When a livestock hygiene service center receives feedback surveillance information from the prefectural livestock divisions in charge and the Animal Health Division, the service center should provide the necessary advice or guidance to livestock owners or their organizations.

(b) Prefectural livestock divisions in charge

In national surveillance, the prefectural livestock divisions in charge shall aggregate information obtained from livestock hygiene service centers and send or electronically transfer the details of inspections during the inspection period unit to the Animal Health Division in writing, by fax, email, etc.

In case of regional surveillance, the prefectural livestock divisions in charge shall aggregate information obtained from livestock hygiene service centers, prepare weekly, monthly, or annual reports containing analyzed and evaluated information in the investigative unit, offer wide-ranging feedback to livestock owners, livestock hygiene service centers, interested prefectures in writing, by fax, email and the Internet and communicate with the Animal Health Division.

(c) Animal Health Division

The Animal Health Division shall promptly aggregate the national surveillance information obtained from the prefectural livestock divisions in charge, prepare weekly, monthly, or yearly reports containing analyzed and evaluated information in the investigative unit, offer wide-ranging feedback to prefectures and relevant organizations in writing, by fax, email and the Internet. In addition, the division shall aggregate regional surveillance as required, add analysis and evaluation and offer feedback.

**(5) Result analysis and evaluation**

- A. The Animal Health Division shall scientifically and objectively analyze and evaluate the nationally aggregated information working with relevant organizations, including NIAH and specialists in the relevant sectors.
- B. Prefectural governments shall scientifically and objectively analyze and evaluate the regionally aggregated information, working with relevant organizations and with the national government and taking in consideration the outbreak status of disease characteristic to the region, regional climate and features and disease characteristics.

- C. To scientifically and objectively analyze and evaluate the information, tables, graphs, maps, etc., should be actively used; attention should be paid to the outbreak status of vectors, climate information and environmental factors comprehensively. The information should be used for epidemiological considerations of diseases, selection of future quarantine measures or evaluation of current quarantine measures and establishment of an outbreak-forecasting method to enhance proactive quarantine measures.

## Appendix 2

### **Guidelines on Hygiene Measure in Dairy Male Calf Facilities**

To stabilize the way feeding, raising and fattening of dairy male calves are managed on farms and diversified dairy farm management in general, it is important to prevent disease outbreak among calves during lactation or the nursery period (by roughly three (3) months of age), when they lack sufficient resistance to disease and are vulnerable to various kinds of stress and reduce the rate of loss. Accordingly, there is a need to ensure that thorough instructions are given in dairy male calf facilities to take various types of effective hygiene measures and prevent losses as follows:

#### **1. Hygiene measures when delivering calves**

When delivering a calf, the following points should be kept in mind and hygiene measures taken to prevent infection of the calf and ensure sufficient maternal antibodies.

- (1) The vicinity of the delivery site should be effectively cleaned and disinfected. Dry bedding materials should be entered and breasts and pudendal region should be effectively disinfected with antiseptic solution immediately before delivery.
- (2) Colostrum should be fed: 500 g or more within 15-30 minutes of birth, about 5% of the body weight twice within 4 and 8 hours of birth and for four days or longer thereafter, 8-10% of the body weight twice or three times a day.
- (3) If a navel string is not effectively disinfected, pathogens may directly enter the body of a calf. Immediately after delivery, the navel string should be dipped in dilute iodine tincture (2-3%) and the process repeated the following day.
- (4) Calves should be moved to a calf hatch. If not used, calves should be accommodated in an exclusive nursery cattle barn and relocated as far away as possible from suckling and adult cattle to avoid infection of bacterial pathogens.

#### **2 Hygiene measures for introduced calves**

When introducing calves from a producer farm, the invasion of the disease with the introduction of calves should be prevented as well as taking hygiene measures, focusing on the following points to minimize transportation stress:

- (1) In introducing calves, in consideration of the loss of body strength along with transport and various types of stresses, farms should buy them from a producing farm in the vicinity, which means they can be transported more quickly.
- (2) Calves should be transported via methods that avoid stresses, including thorough ventilation and avoiding direct sunlight.

- (3) When selecting calves, confirmation should be made to see they drink the initial mother's milk sufficiently.
- (4) Before introducing calves, the inside and outside calf hatches or nursery cattle barn should be disinfected and dried as well as placing sufficient bedding in a cow pen.

Furthermore, a vehicle disinfection tank should be placed at the entrance for vehicles, a step-in disinfection tank for working boots at the entrance of nursery/breeding cattle barn and a finger disinfecting stand at the entrance of the isolation cattle barn. Full attention should be paid to pollution in the disinfection tank and the antiseptic solution should be replaced once or twice a week.

- (5) Before accommodating a calf in the nursery cattle barn or a calf hatch, a neck tack or ear mark should be attached for individual recognition while clinic observation, measuring temperature and disinfection of the calf body and limbs should be conducted. If any abnormality emerges on this occasion, the calf should be moved to an isolation cattle barn for workup procedure and treatments and controls suitable for the disease condition should be given.
- (6) Immediately after introduction, a calf should be allowed to rest fully to recover from fatigue and exhaustion caused by transport and the rapidly changing environment.
- (7) If a calf does not take in colostrum sufficiently, frozen or fermented colostrum should be fed to decrease the outbreaks of diarrhea. In addition, it is desirable to feed introduced cattle, including such calves, on whole milk until they are 2-3 weeks' old.

### **3 Hygiene measures during the lactation period**

During the lactation period, hygiene measures should be taken, focusing on preventing the outbreak of diarrhea and on the following points:

- (1) Strictly observe individuals.
- (2) It is desirable to use calf hatches during the lactation period. If a calf is bred in a cattle barn for unavoidable reasons:
  - A. Ventilation must be good, but drafts should be prevented.
  - B. Cleaning and disinfection should be strictly carried out and the inside of the barn should be kept dry.
  - C. Mouth-to-mouth and face-to-face contact among calves should be prevented, calves should not be allowed to lick each other's omphalos and abnormal cattle should be individually bred.
- (3) Hygiene management should be ensured, including disinfection of rearing

devices (exclusive lactation bucket) before use without fail and cleaning, drying and storage of the same after use.

Besides, at least once a week (or twice in summer), substances dissolved in milk in rearing devices should be disinfected with a weak solution of inversed soap or soda hypochlorite.

#### **4 Hygiene measures in the nursery period**

During the lactation period, diarrhea is common while the nursery period sees respiratory diseases occur more often. Hygiene measures should be taken, focusing on preventing the outbreak of respiratory diseases and on the following points:

- (1) To facilitate observation of individuals and promote uniform growth, certain breeding area should be secured and health screening conducted before group feeding without fail and any abnormal calves should be sidelined from the group feeding.
- (2) In preparing a hygiene management program for the lactation/nursery period, particularly the immunization program, the past outbreak status of infectious disease, in the region as well as the facilities, should be considered. Where possible, serological tests should also be conducted for part of the feedlot cattle groups of the facilities and the results used for reference.

#### **5 Hygiene management in rearing and fattening periods**

During the rearing/fattening period after the calves reach the age of three months old, hygiene measures should be taken, focusing on the following points:

- (1) In introducing feeding calves, those which finish necessary immunization should be bought. However, if immunization has not been conducted, the necessary immunization should be given without fail 2-3 weeks after introduction.
- (2) A group should comprise introduced feeding calves of almost equivalent age and weight. They should be accommodated in a wide calf pen which is effectively ventilated, naturally lit and with clean and sufficient bedding materials and ear marks and nose rings should be attached.
- (3) Endoparasite (*fasciola hepatica*, *dictyocaulus viviparus*, gastrointestinal nematodes, etc.) should be dewormed and mycosis and urolithiasis should be prevented.

#### **6 Prevention of disease outbreak**

It is important to thoroughly implement hygiene management to prevent outbreaks of diseases. A portion of cattle affected with some types of diseases may be an infection

source as carriers after they recover from symptoms affecting the appearance. Once a disease invades, particularly into nursery/rearing facilities, it is important to ensure predetermined quarantine measures as well as properly determining the prognosis and suitable selection timing. If a vaccine exists for a disease, there is a need to effectively promote quarantine by immunization in a well-planned manner as required.

## Appendix 3

### Guidelines on Hygiene Measure in Pastures

When producing beef cattle, it is important to promote grazing to reduce the production cost, but various types of pasture diseases, including small Piroplasmiasis, are great inhibition factors and countermeasures are essential.

Accordingly, there is a need to ensure that thorough guidance is given to take various types of effective hygiene measures and prevent losses from pasture diseases

#### 1 Basic Promotion Direction

In general, as part of basic hygiene management, quarantine measures based on hygiene programs and detecting and treating abnormal cattle from an early stage by ensuring sufficient observation of individuals are conducted. However, given frequent difficulty of observing individuals in the pasture sufficiently, it is necessary to:

- [1] Detect cattle unsuitable for pasture and abnormal cattle by hygiene inspections before and during pasture and suppressing damage and
- [2] After preparing a management program based on the thorough implementation of detecting grass and cattle bodies, prepare hygiene measures, focusing on the following:

##### (1) Implementation of hygiene inspection

- A. Livestock keepers should submit applications for would-be range cattle a few months before entering the range to pasture managers. About one month before entering the range, the cattle should take hygiene inspections. Based on results, it is then determined whether the pasture is appropriate for individuals.
- B. Besides, necessary measures should be thoroughly taken at the time of immunization, dehorning and hoof cutting. In case of immunization, in consideration of the outbreak status in the region and the pasture area, diseases necessary to vaccinate against cattle para influenza, Infectious bovine rhinotracheitis, bovine viral diarrhea, mucosal disease, Blackleg, etc.

##### (2) Guidance on habitual grazing

There should be a more in-depth understanding of the importance of pasture stress, climate and feed should be acclimatized. In particular, acclimatization should start 1 month before the beginning of cattle breeding in the case of first ranching of suckler cattle and two weeks before for cattle that resume ranching.

##### (3) Inspection and maintenance of pasture hygiene facilities and instruments

Pasture managers should carefully inspect and maintain various types of sanitary

facilities for pastures, including continuous crates, dip tanks, hospitals and cool-temperate forests and strive to prevent accidents, particularly those at the early stage of cattle breeding.

## **2. Hygiene measure at the beginning of cattle breeding in pasture**

Cattle with no abnormalities in confinement rearing, may fall ill due to stresses caused by transport or contact with other cattle. When the cattle breeding starts, hygiene inspections should be conducted for all cattle to reaffirm whether or not they are suitable for pasturing. In this case, blood samples should be taken from all cattle and the serum preserved for a certain period.

Moreover, based on the results of the hygiene inspections, etc., pasture managers and management outsourcers should review specific measures during any abnormal situation.

## **3. Hygiene measure during grazing**

- (1) Suckler cattle often fail to adapt well to the environment soon after cattle breeding gets underway. It is desirable to ensure a few week's preliminary pasture to see whether the cattle can adapt to the environment.
- (2) In case of any shortage of herbage, measures should be taken, including supportive supplies of feed mixtures and hay.
- (3) The pasture monitoring should be conducted twice daily during the preliminary pasture, followed by at least once a day. Abnormal cattle, if any, should be fully observed, their abnormalities and notable points and measures taken should be recorded in a journal.
- (4) After the start of pasture, hygiene inspections should be regularly conducted at least once a month along with body weight. On this occasion, guidance should be given to detick cattle bodies. Moreover, special inspections should be performed during periods when numerous affected cattle are expected, in light of the past status of occurrence or when cattle suspected of suffering from infectious diseases emerge.
- (5) When confirming sick cattle during grazing and when they are suspected of having contracted acute infectious disease because many show the same symptoms, the necessary measures should be taken, including isolation. Furthermore, if range cattle die suddenly, requests should be made to a veterinarian to identify the cause.

#### **4. Hygiene measure at the time of leaving pasture**

When cattle leave the pasture, including midway through the status, their health status should be fully confirmed. With a view to preventing cattle from bringing in ticks and pathogenic microorganisms, etc. to farms, clinical inspections, fecal examinations and ectoparasite inspections should be conducted, focusing particularly on ticks, *Dictyocaulus viviparus* and cutaneous fungal disease and with extermination or treatment preferable before they leave pasture. If the cattle leaves pasture before finishing treatment, guidance should be given to farms to isolate them from other cattle and continue treatment.

Consideration should be given to set the implementation timing for this inspection at the time of leaving the pasture so that the pasture can take the measures where possible when action is necessary based on the inspection results.

## Appendix 4

### **Guidelines on Hygiene Measures at swing housing including pig farms**

To stabilize swine production, it is important to eliminate health hazards caused by background factors, including the recent intensive production system, prevent disease outbreaks and low productivity. In particular, when a disease occurs or may potentially do so, there is a high risk of propagation to fattening pig herds in general pig farms through distribution via boars. Thorough guidance should be provided to pig farm facilities, including boar farms, to take various effective hygiene measures as shown below to clean up the disease.

#### **1 Location of facilities and limited access**

To clean up diseases at farms, attention should be paid to the following points to prevent the spread of and invasion of pathogens in farms. Farms should strive to lay out facilities and restrict access.

- (1) Farms should install partitions, including nets and fences, on the boundary, clearly separate their premises from the outside and restrict entrances to control access and prevent dogs and cats from invading.
- (2) Pigsties should be classified by development/rearing stages and scope to isolate introduced pigs (hereinafter referred to as “quarantine sties”) and other facilities to isolate sick pigs (hereinafter referred to as “isolation sties”) should be established. On this occasion, management works should be conducted in one way in terms of quarantine and environment and working operations and reasonable arrangements should be ensured.
- (3) As a general rule, pigsties should have heat-insulated structures and due regard should be paid to ventilation. Moreover, pigsties should be improved: floors, ceilings and walls should be easily washable and disinfected and have good water resistance.
- (4) When visitors enter farms, disinfection of clothes, shoes, hands and fingers should be ensured without fail and where possible, hats, upperwear, trousers, shoes, etc. should be replaced with items exclusive for the farms. Moreover, in accessing quarantine or isolation sties, all relevant persons must re-disinfect their clothes, hands and fingers and replace their clothes, rubber boots, etc. with exclusive ones.
- (5) As a rule, the access of general vehicles is prohibited. If they are allowed to enter, they should be disinfected at the entrance. In delivering materials, spraying disinfection should be conducted as appropriate.

## **2 Hygiene management in facilities**

To prevent diseases, it is important to focus on isolation from the outside and proper arrangement in facilities, etc. and ensure daily hygiene management to prevent pathogens from scattering and maintain a good breeding environment. Accordingly, even if the facilities are isolated from the outside, farm workers should keep in mind that the inside of the facilities are not fully cleaned up and always focus on the following to take all possible measures for hygiene management of such facilities:

### **(1) Thorough anticontamination measures for facilities, etc.**

- A. At the entrance to every sty, hand and finger disinfection facilities, a step-in disinfection tank for working boots and tools for cleaning/disinfecting apparatuses should be placed. Facilities located in the premises, including an administrative building, sty and feed shed should be cleaned and disinfected regularly.
- B. Pigsties should be operated with an all-in/all-out system where possible. The sty after all-out should be fully cleaned, washed and disinfected after removing feces and feeds, etc. After a certain interval, disinfection should be repeated immediately before introduction of the next pig herd.

If it is difficult to apply an all-in/all-out system to a sty, after it is used for a certain period, it must be left empty for a while without fail and thoroughly cleaned and disinfected.

- C. Rodents and household insects should be exterminated from pigsties, administrative buildings, warehouses, etc. regularly or as necessary.
- D. Working clothes should be kept clean, exclusive management equipment should be provided by the sty building and kept clean at all times. As a rule, the equipment should be washed and disinfected after each use.

### **(2) Thorough individual hygiene management**

- A. When mother pigs are moved to a sty for delivery, their bodies should be well washed and disinfected and insecticide applied as required.
- B. Pigsties should be kept at the proper temperatures. In particular, effective heat-insulating facilities should be installed in a sty where piglets are reared. When it is hot in summer, it is desirable to take measures to protect against heat, including air blowing, One Man Spray and showers.
- C. When introducing boars from outside farms, they should be accommodated in quarantine pigsties without fail, isolated and observed for at least two weeks to see if there is any abnormality. If any abnormal pig is found, its pathology should be determined and the necessary measures taken.
- D. When a pig is moved from a quarantine or isolation sty to a general sty, there is a need to confirm the animal is clean and clean and disinfect it as required.

- E. If it is suspected that pigs died from an infectious disease, farms must request that the center for pathological appraisal assess livestock hygiene.

### **3 Prevention and treatment**

To prevent diseases, daily general hygiene management as well as necessary measures, including scheduled implementing immunization, cleanup of diseases and introduction of boars from cleanup areas without outbreaks of disease. Once diseases invade, a portion of the affected pigs affected with some types of diseases may remain carriers and infection sources after they recover from symptoms in appearance. In boar farms in particular, quarantine measures for carriers should be conducted thoroughly.

There is a need to effectively use immunization as a method of health care if the vaccine has already been developed.

### **4 Hygiene management system**

To ascertain the hygiene status of boar farms, there is a need to focus on the following points and clarify the infiltration states of diseases among groups of boars. Accordingly, it is important to ascertain the health of piglets and hygiene states of boar farms by fattening and shipping piglets other than boar candidates as monitors and revealing hygiene problems, using necropsy findings from slaughtering inspections.

- (1) Diagnostic procedures for some chronic infectious diseases have not been developed and causal connections between damage states are often not clarified while the affected pigs are alive. Records concerning breeding and rearing should be kept, including details such as the annual number of deliveries, conception, the number of stillbirths and miscarriages and their states, the number of weaned piglets per litter, the number of sudden deaths and the selection and rearing status, utilizing them as technical indicators and measures to determine diseases and their infiltration states.
- (2) During daily feeding controls, efforts should be made to find abnormal pigs at an early stage. Farm workers should determine inspection items for their hygiene controls in advance, check pigs regularly and improve the controls.

### **5 Others**

Guidance should be given to introduce hygiene management to pig farms other than boar farms pursuant to this guideline for measures.

## Appendix 5

### Guidelines on Hygiene Measures at Poultry Housing including Hatcheries

The Japanese poultry industry has recently experienced large-scale expansion, integration and upsurge. This has seen various chicken diseases break out, which have impacted on management. Many of these diseases result from improper hygiene management at facilities, with hatch hygiene measures at hatcheries particularly important for chicken hygiene. Accordingly and particularly in breeder chicken farms, currently applicable various measures (periodic inspection, immunization and improvement of the feeding environment, etc.) should be used to maintain the cleanup in facilities, particularly when it comes to thoroughly disinfecting hatching eggs and incubators for eggs and improving hygiene management. Guidance should be given to take the following effective hygiene management and improve the hygiene of hatcheries and poultry housing.

#### 1 Location of facilities and limited access

To clean up diseases at poultry housing, including hatcheries, attention should be paid to the following points to prevent the spread and invasion of pathogens in farms. Farms should strive to lay out facilities and restrict accesses.

- (1) Breeder chicken farms and hatcheries, etc. should be placed in sites with good ventilation and drainage where few other poultry houses are located.
- (2) Partitions should be installed around chicken farms and hatcheries, etc., to prevent access from unauthorized persons and invasion of homeless dogs. At the entrance to facilities, a dressing room should be established. The room layout from the outside should be: [1] A room where outerwear is removed (or a locker room), [2] A shower room, (or bath) and [3] A room to wear inner wear (or a locker room). If it is impossible to establish all of these, locker or other rooms for outerwear and inner wear should be separately established.

In addition, caps, jackets, trousers and shoes must be exchanged at the time of entry without fail.

- (3) Unnecessary visitor access to facilities, including not only poultry houses and hatchery houses but also breeding chicken farms and hatcheries, is forbidden as is the entry of general vehicles to facilities as a general rule. At the entrance of facilities, vehicle disinfection facilities should be placed so that disinfection is ensured when vehicles enter and materials are carried in for unavoidable reasons.
- (4) Relevant parties in breeding chicken farms, hatcheries, etc., (employer and employees) should avoid breeding chickens and other birds at home and strive to

exterminate medical animals including rodents and prevent the invasion of wild birds.

## **2 Hygiene management in facilities**

In general, in the case of reared chicken herds, although the invasion of pathogens from the outside can be completely prevented, not all resident microorganisms can be removed. In general, most of these resident microorganisms have very low pathogenicity or the infections they may cause mild symptoms in rare cases. However, in the event of improper hygiene management of poultry houses and hatchery houses, they can cause collective diseases, hence the need to always treat chicken herds and hatcheries hygienically while cleaning up the inside of facilities.

### **(1) Thorough anticontamination measures at breeder chicken farms**

- A. At the entrance of every poultry house, hand and finger disinfection facilities, step-in disinfection tank, washing areas for equipment should be placed. Various kinds of feed control facilities located in the premise including administrative buildings, poultry houses and feed sheds, should be cleaned and disinfected regularly.
- B. Poultry houses should operate an all-in/all-out system on a building basis where possible. After all-out, poultry houses should be fully cleaned, washed and disinfected after removing feces, feeds, etc. After an interval of two or more weeks, the next chicken flocks should be introduced. Again, disinfection should be conducted immediately before introduction.
- C. Working clothes should be always kept clean. Exclusive management equipment should be provided by the poultry houses and kept clean at all times. As a rule, the equipment should be washed and disinfected after each use.

### **(2) Thorough hygiene management of hatching eggs**

Egg-laying boxes should be always kept clean and eggs gathered as frequently as possible. Immediately after gathering the eggs, their surfaces should be disinfected. Disinfected hatching eggs should be kept in an egg storeroom under suitable conditions. Attention should be paid to prevent dew condensation on the surface of hatching eggs due to temperature variations. Cracked eggshells, eggs with anomalies, eggs on the floor and with dirty eggshells shall not be used as hatching eggs.

### **(3) Thorough anticontamination measures at hatching facilities**

- A. Hatchery houses should have a fumigation room, an egg storeroom, a hatchery room, differential and selection rooms, a preventive injection room, chick packing/shipment room and chick holding room shut off sanitarily, efforts should be made to establish one-way-type work processes and take contamination

prevention measures equivalent to those in breeding chicken farms. Hatchery rooms should be classified into setter and hatcher rooms and it is desirable to use the all-in/all-out system.

- B. During differentiation, containers for meconium from chicks are contaminated with many bacteria. After using, both contents and containers should be thoroughly disinfected.
- C. Vehicles used to transport chicks should be washed and disinfected each time after use. It is desirable to use air-conditioned (temperature-controlled) roofed cars for transport.
- D. Hatching eggs sent to hatcheries shall be disinfected by formalin fumigation, dipping in 42-43 degrees Celsius inverted soap suds immediately before avoiding contamination and saving them in an egg storeroom. When the temperature and humidity reach the normal setting conditions after moving the hatching eggs from a setter to a hatcher, formalin fumigation should be conducted.
- E. Before use, hatchery buildings and rooms should be cleaned and washed and formalin fumigation conducted for 24 hours or more. In particular, residues (egg shells, eggs for which growth has stopped, dead in-vitro eggs, fluff, etc.) contain many bacteria. Before cleaning and disinfecting the hatchery building, preliminary spraying of antiseptic solution or formalin fumigation should be conducted while cleaning with a vacuum cleaner. Furthermore, after collection, residues should be incinerated or disposed of after thorough disinfection.
- F. Formalin gas is harmful to humans and animals. Be sure to wear suitable protective equipment such as mask, goggles, gloves, etc.

## **Appendix 6**

### **Guidelines on Hygiene Measures at Group Breeding Facilities including Racecourses**

As large-scale group rearing of racehorses has become more popular, they are moved around more often. Moreover, group breeding of riding horses has also developed and there are more opportunities to interact with other horses. In such an environment, it is essential to maintain the health of racehorses and improve their potential to promote horse-racing organizations and production of riding horses. Accordingly, there is a need to further enhance hygiene management of racehorses and ongoing guidance should be provided for various kinds of effective hygiene measures in national harmonization as follows:

#### **1 Development/maintenance of a hygiene management system**

##### **(1) Arrangement of staff overseeing quarantine**

At least one staff member overseeing quarantine (veterinarian) should be appointed in a management secretariat to oversee planning of quarantine, hygiene management guidance and communication of information.

##### **(2) Control of veterinarians**

To maintain appropriate medical care of racehorses in facilities, clinics with necessary equipment should be developed and secure veterinarians by employing full- or part-time veterinarians and controlling their activities.

#### **2 Quarantine/hygiene management implementation standard**

##### **(1) Quarantine at the time of stabling**

###### **A. Apply for stabling approval and specify the date**

If anyone wants to bring a horse into a stable (horse owner or trainer), he/she should apply for stabling approval to the management secretariat in advance to have a stabling date designated.

###### **B. Quarantine at the time of stabling**

###### **(a) Inspection of documents**

Horse certificate notebooks and immunization certificates should be submitted to the management secretariat for inspection.

###### **(b) Inspection**

Horses brought into stables should be accommodated in quarantine stables to facilitate inspections, including clinical inspections, when first brought in.

(c) Stabling

If no abnormality is found in the inspection results, horses can enter the general stables.

**(2) Submittal of Notification of Leaving Stables**

If anyone (horse owner or trainer) plans to have a horse leave a stable, he/she should submit a notification of leaving stables to the management secretariat before the horse leaves the stable.

**(3) Immunization**

Immunization of equine influenza, infectious encephalitis, etc. should be conducted in a well-planned manner and injection certificates should be developed.

**(4) Daily hygiene management**

A. Measuring the temperature of horses in the stable

A temperature chart should be distributed for each horse so that the temperature can be measured each morning and evening and the results entered under the supervision of the breeding manager (including animal trainer).

B. Disinfection of horse barns

Cesspits, horse manure storage facilities and dirty water ditches should be regularly disinfected.

In addition, in places and other facilities where outbreaks of insects actually occur or may occur, light and fly traps should be placed and insecticide applied to prevent insects.

In addition, rodenticide should be applied once a year or more to exterminate rodents within and outside stables.

C. Notification and isolation of abnormal horses

(a) For horses with fevers, horses under healthcare, etc. which are suspected of infectious disease, any veterinarian having diagnosed or found the disease (including animal trainer) should promptly notify the management secretariat.

(b) Following inspections conducted based on the notification, if an infectious disease or suspected disease is determined and the need for isolation is confirmed, the horse should be moved to an isolation stable and isolated for the required term.

(c) In case of (B) above, staff members overseeing quarantine of facilities, including racecourses, should make the required notifications to a livestock hygiene service center and promptly notify the secretariat of Keitaneuma Boeki Kyogikai of events leading up to the occurrence and measures, etc.

### **3. Development/maintenance of hygiene facilities**

Facilities including racecourses should develop hygiene facilities including clinics (including equipment required for inspections), quarantine stable, isolation stable, cesspool (with roof) and wastewater treatment facility and strive to ensure quarantine measures.

## Appendix 7

# Import Inspection Guidance for Imported Livestock

## 1 Period of import inspection

As a general rule, an import inspection should be conducted for three months after livestock (those listed in Article 2 of the Act and the right-hand column of the table in Article 1 of the Cabinet Order arrive at a place where the inspection is conducted (hereinafter the “destination”). However, the period of import inspection for racehorses and riding horses can be shortened to three weeks pursuant to Note 3 of “Import Quarantine and Import Inspection Conducted at the Return of Horses on Overseas Expedition” (Notification of the Director-General, Livestock Industry Bureau, MAFF dated August 10, 1990, 2-ChikuA No.1654). In addition, as a general rule, no import inspection other than for cloven-hoofed animals, rabbits, dogs, honey bees, livestock to be exhibited in zoos should be conducted.

## 2 Measures taken at the Animal Quarantine Service

### (1) Guidance to importers

The Animal Quarantine Service gives guidance on the following points to importers:

- A. If imported livestock for shows are going to be moved during import inspections, show plans should be notified to prefectural livestock divisions in charge in prefectures of the movement destination during the period.
- B. When purchasing livestock overseas, importers should contact with agencies overseeing livestock hygiene in advance, fully understand the livestock’ hygiene status in the exporting country and purchase animals from farms in areas in which infectious diseases in domestic animals have been eliminated.

### (2) Scheduled destination notification

The Animal Quarantine Service notifies the prefectural livestock division in charge in a prefecture where the imported animals are located of the matters required at import inspection, including those in Form No. 23 based on Article 49 of the Ministerial Ordinance before the imported animals arrive at the destination.

### (3) Quarantine result notification

- A. When a monitored infectious disease is detected during an import quarantine, the Animal Quarantine Service shall promptly notify the prefectural livestock divisions in charge in prefectures where the destinations of livestock in the same batch as livestock with the disease are located (all livestock imported in the same ship/airplane or accommodated in the same quarters as animals with the

disease) and the Animal Health Division.

- B. Immediately after imported livestock are released, the Animal Quarantine Service shall notify prefectural livestock divisions in charge in prefectures of destinations in Appended Form 5 of the inspection results in exporting countries and theirs.

### **3 Inspection guidance conducted by prefectures**

It is necessary for prefectural governments to give guidance on the following matters to imported livestock animal keepers based on notifications from the Animal Quarantine Service:

#### **(1) Place of import inspection**

- A. Imported livestock should be bred in places or facilities (hereinafter referred to as “isolation facilities”).
- B. Equipment used in isolation facilities should be exclusive and disinfection tanks should be placed at entrances.
- C. Livestock waste and waste materials should be treated hygienically.
- D. The invasion of medical animals, including rodents, should be prevented.

#### **(2) Restriction of movement of domestic animals during import inspections**

As a rule, imported livestock should not be moved during import inspections. However:

- A. Imported horses can be moved to undergo inspections necessary for the registration of horse name to run in a race due to unavoidable reasons provided the inspections are conducted under a status where they are isolated from other animals.
- B. Imported livestock for shows can be moved if due to unavoidable reasons of show project plan, provided close communication follows with relative livestock divisions concerning the hygiene status during the import inspection and under the status of isolation from other animals.
- C. Imported horses other than A or B can be moved if permitted by an animal quarantine officer and in consideration of animal hygiene measures.

#### **(3) Rearing hygiene management**

- A. Hire a full-time feeding administrator for an isolation facility whenever possible.
- B. Nobody other than relevant parties are prohibited to visit isolation facilities.
- C. When going into and leaving isolation facilities, hats, upperwear, trousers and rubber boots, etc. should be replaced with ones exclusive for the facilities, hats, upper wears, trousers, rubber boots, etc. as well as hands and fingers should be

disinfected.

- D. Working in isolation facilities should be done on completion of working elsewhere.
- E. Efforts should be made to ascertain the health status of domestic animals bred in isolation and records should be kept. If any abnormality is found, notification should be promptly made to the livestock hygiene service center. In addition, isolation facilities and mangers, etc. should be cleaned, purified and disinfected.
- F. Vaccination should be implemented as required in consideration of animals' hygiene status at import inspection places.
- G. Isolation facilities should establish treatment stalls where possible to facilitate hygiene measures.
- H. For imported horses (excluding fattening horses, reared in isolation from horses for other usages reared in Japan), advice and guidance should be given to have an interval of at least one month after import and take inspections for equine infectious anemia during the period of import inspection. Besides, the import inspection is shortened to one month or less in case of overseas expedition horses. Advice and guidance should be given to them to have inspections immediately before the end of the period if possible.
- I. Advice and guidance should be given to imported livestock keepers to isolate them from horses bred for other purposes in Japan after import until shipping to slaughterhouses.

#### **4 Landing inspection conducted by prefectural governments**

- (1) It is important for prefectures to closely communicate with imported livestock animal keepers and focus on clinic observations during the import inspection period to ascertain the health status.

Inspections should be conducted around once per month after implementation at the time of introduction. In addition, if any abnormality is found, thorough examinations, including a serological test, should be conducted.

- (2) As a general rule, prefectures conduct at least one thorough inspection of the disease during the period of import inspection of livestock with epidemiological relations with animals with a monitored infectious disease detected during the import quarantine. In this case, the first thorough inspection should be conducted within about 2 weeks to 1 month after the livestock arrives. However, if the disease is anaplasmosis, Piroplasmosis, or equine viral arteritis, thorough inspections should be conducted as follows:

- A. Anaplasmosis (caused by pathogens stipulated in Article 1 of the Ministerial Ordinance)

Microscopic examination of blood smears (once a month) and CF inspection

- B. Piroplasmiasis (caused by pathogens stipulated in Article 1 of the Ministerial Ordinance)

Microscopic examination of blood smears (once a month)

- C Equine viral arteritis

Serum should be collected from the imported horse and sent to the Animal Quarantine Service. The Animal Quarantine Service implemented a neutralization test and report the results to prefectural livestock divisions in charge and the Animal Health Division.

## **5 Reporting inspection results of import inspection**

If prefectures should conduct thorough examinations in 4(1) and if any monitored infectious disease is detected and examinations are conducted pursuant to 4(2), they should promptly report the results to the Animal Health Division.

## Appended Form 1

### 1 Outbreak report

Subjected diseases	<ol style="list-style-type: none"> <li>1 Affected or suspected carriers of rinderpest, contagious bovine pleuropneumonia, foot-and-mouth disease, infectious encephalitis, vesicular stomatitis, Rift Valley fever, hemorrhagic septicemia, glanders, African horse sickness, classical swine fever, African swine fever, swine vesicular disease, fowl cholera, highly pathogenic avian influenza, low pathogenic avian influenza, or Newcastle disease (limited to those listed in each item of Article 1-2 of the Ministerial Ordinance)(Article 25 paragraph 1 item 1 of the Ministerial Ordinance)</li> <li>2 Affected or animals suspected of being affected other than those in 1 above (Article 25 paragraph 1 item 2 of the Ministerial Ordinance)</li> <li>3 Monitored infectious diseases other than 1 and 2 above that seem to have a serious impact on domestic animal hygiene.</li> </ol>
Reporting	<ol style="list-style-type: none"> <li>1 Name of disease, type of domestic animal, date when determining the pathology, number of affected birds/animals and outcome</li> <li>2 How to determine affected or suspected carriers</li> <li>3 Clinical symptoms and necropsy findings</li> <li>4 Quarantine measures</li> <li>5 Epidemiological considerations</li> <li>6 Others</li> </ol>
Remarks	<p>If an important infectious disease, which does not exist in Japan and emergencies occur and the report is made on a holiday or outside standard hours, a report should be made to Quarantine Service Group of the Animal Health Division.</p> <p>During downtime, reports should be made to the Quarantine Service Group of the Animal Health Division</p> <p>We want to know the emergency contact numbers of prefectures on holidays and outside standard hours. Any change should be reported when made.</p>

## 2 Detailed outbreak report (only to the Animal Health Division.)

Subjected diseases	<ol style="list-style-type: none"> <li>1 Affected or suspected carriers of rinderpest, contagious bovine pleuropneumonia, foot-and-mouth disease, rabies, vesicular stomatitis, Rift Valley fever, hemorrhagic septicemia, glanders, African horse sickness, African swine fever, swine vesicular disease, fowl cholera, highly pathogenic avian influenza, low pathogenic avian influenza, or Newcastle disease (limited to those listed in each item of Article 1-2 of the Ministerial Ordinance)</li> <li>2 Infectious diseases in domestic animals other than the above shown that seem to have a serious impact on the hygiene of domestic animals</li> </ol>
Reporting	<ol style="list-style-type: none"> <li>1 Name of disease, type of domestic animal, date when determining the pathology, place of outbreak, number of affected birds/animals and outcome</li> <li>2 How to determine affected or suspected carriers</li> <li>3 Clinical symptoms and necropsy findings</li> <li>4 Quarantine measures</li> <li>5 Epidemiological considerations</li> <li>6 Others</li> </ol>
Remarks	After the end of the outbreak, promptly report to the Animal Health Division in writing.

**Appended Form 2**

**Infectious diseases in domestic animals Prevention Project Plan in 20xx**

Name of prefecture

Unit: Head, thousand, herd/flock, %

**1 Breeding Status of Domestic Animals**

		Cattle				Pig			Chickens				Honeybees		
		No. of Animals				No. of Animals			No. of Chickens				No. of Reared Groups		
		Dairy Cow	Beef Cattle		Total	Breeding Sow	Others	Total	Breeding chickens	Layers	Meat-type chickens	Total	Stationary Keeping	Transitional Keeping	Total
			Breeding	Fattening											
Previous Year															
Business Year	No. of animals/ birds														
	Year-on-Year														

		Other Domestic Animals						Summary
		No. of Feeding Animals						
		Horse	Sheep	Goat	Wild boar	Others	Total	
Previous Year								
Business Year	No. of animals/ birds							
	Year-on-Year							

Note 1. For transitional beekeeping, enter the total number of groups that move beyond prefectural borders.

2. Enter the specific type of domestic animals such as water buffalo and deer.

**2 Policies for Undertaking Infectious diseases in domestic animals Prevention Project in 20xx (Enter policies by livestock.)**

**3 20xx Outline of Priority Implementation Project**

Species	Target Diseases, etc.	Inspection, Injections, Dipping, Medication Categories	No. of Raised Chickens in Implementation Area/Facility		Scope of Study Species and Volume (No. of Animals/Chickens)		Timing of Implementation	Summary
			Name of Implementation Area or No. of Implementation Facilities	No. of Chickens bred in the left area No. of Reared Chickens	Scope of Study Species	Production Volume		
						No. of Animals (Birds)		

Note 1. If an inspection is conducted, the inspection items and methods should be entered in the Remarks column, if injection, dipping, or medication is conducted, the medication used should be specified in the Remarks column.

2. Purposes (meat, dairy, rearing, breeding, egg harvest, meat, or breeding chicken, etc.) in Scope of Study Species,

**4 20xx Implementation Plan**

Project Category	Disease Category	No. of Implemented Animals/Birds (Herds/Flocks)		Required No. of Persons (Total)				Articles of Governing Laws	Summary
		Actual No. of Animals/Birds (Herds/Flocks)	Total No. of Animals/Birds (Herds/Flocks)	Animal Quarantine Officer	Employed Veterinarians	Total	Average Implementation No. per Person per Day No. of Birds (Flocks)		
Inspection Project Category	Clinical Investigation								
		Sub total							
	Thorough Inspection								
		Sub total							
	Total								

Injection Project									
	Total								
Outbreak of Parasitic Disease Prevention Project									
	Total								
Total									(Actual Number of Employed Veterinarians :)



**5 Medicine Use (Purchase) Plan**

Medication Name	No. of Implemented Animals/Birds (Total)	Use (Purchase) Quantity		Unit Price per Sales Unit (Yen)	Required Amount (Yen)	Summary
		Quantity (Unit: bottle, box, etc.)	1 Unit per Small Quantity (Unit: g, ml, box, etc.)			
Disinfection Name						
	Subtotal					
Inspection Medication						
	Subtotal					
Dipping Medication						
	Subtotal					

A disposition to slaughter Medicine							
	Subtotal						
Infection Prevention Medicine							
	Subtotal						
Total							

- Note 1. Scope of Subsidiary in “Determining Expenses Incurred in Purchasing Medicines, Hygiene Equipment and Incineration or Burial Designated by the Minister of Agriculture, Forestry and Fisheries pursuant to the Provision of Article 60 paragraph 1 items 6-8 of the Act on Domestic Animal Infectious Disease Control” (Ministry of Agriculture, Forestry and Fisheries Notification No. 1172 of June 2, 2004; hereinafter referred to as the “Notification Specified by the Minister”) shall be limited to expenses required by prefectural governors or animal health inspectors pursuant to the provisions of the Act and expenses used by orders of prefectural governors or instructions of animal health inspectors shall be excluded.
2. Disinfection medicines are stated in 1-B of the Notification Specified by the Minister, including the medicines stated in the disinfection standard prescribed in Appended Tables 3 and 4 of the Ministerial Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases and disinfection medicine containing these medicines with effects equivalent to the disinfection. Pharmaceuticals specified in “Determining Medicines Designated by the Minister of Agriculture, Forestry and Fisheries and Usage Separately Specified pursuant to the provisions of Attached Table 2 of the Ministerial Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases Control” (Ministry of Agriculture, Forestry and Fisheries Notification No. 1128 of June 2, 2014) are limited to those obtaining an approval pursuant to the provisions of the Act on Securing Quality, Efficacy and Safety of

Products Including Pharmaceuticals and Medical Devices (Act No. 145 of August 10, 1960; hereinafter referred to as the “Act on Pharmaceuticals and Medical Devices”).

3. Inspection medicines are those listed in (1)-d of Notification Specified by the Minister and biologics for animals that passed official verification pursuant to the provision of Article 43 of the Act on Pharmaceuticals and Medical Devices.
4. Dipping and medication medicines are those listed in (1)-(b) and (c) of the Notification Specified by the Minister. The Scope of Subsidiary in (1)-(b) shall include the cases where they are used for disinfection including places of outbreak animal quarters, inspection and injection, etc.
5. Medicines used for a disposition to slaughter are those listed in (1)-(e) of the Notification Specified by the Minister.
6. Infection prevention medicines are those listed in (1)-(f) of the Notification Specified by the Minister.
7. Product names should be entered as medicine names. In case of disinfection, dipping and medication, the key component names and method of use should be entered in the Remarks column. In case of inspection medication, the relevant diseases should be entered in the remark column, in case of a disposition to slaughter medicine, the relevant domestic animals should be entered and in case of infection prevention medicine, the relevant disease names should be entered.
8. If medication required for the Outbreak of Parasitic Diseases Prevention Project is used, in the Required Amount column, besides the total required amount, the amount borne by the national treasury should be entered with brackets, in Subtotal and Total columns, in addition to the total required amount, the amount borne by the national treasury should be entered with brackets.

## 6 Biological Preparations for Animals Use (Purchase) Plan

Name of Biological Preparations	Use (Purchase) Plan							Required Expenses		Summary	
	Previous Period (April - September)		Latter Period (October - March)		Total			Average Use Amount per Animal/ Chicken	Unit Price per Sales Unit (Yen)		Amount (Yen)
	No. of Implemented Animals/ Birds (Total No. of Animals/ Birds)	Amount of Use (Purchase) (bottle, box, etc.)	No. of Implemented Animals/ Birds (Total No. of Animals/ Birds)	Amount of Use (Purchase) (bottle, box, etc.)	No. of Implemented Animals/ Birds (Total No. of Animals/ Birds)	Amount of Use (Purchase)					
						Amount of Use (Purchase) (bottle, box, etc.)	Quantity per Sales (ml, Analyte, Box, etc.)				
<b>Total</b>											

- Note 1. Biological preparations for animals are verified pursuant to Article 43 of the Act on Pharmaceuticals and Medical Devices.
- The names of biological preparations for animals should be entered by type (live virus vaccine, inactivated vaccine, etc.) separately,
  - The Amount of Use (Purchase) column should be filled with sales quantity rather than sales unit.

**7 Hygiene Material (Purchase of Lease) Use Plan**

Material Name	Amount of Use (Purchase)		Unit Price per Sales Unit (Yen)	Required Amount (Yen)	Summary
	Quantity	Unit Price per Sales Unit (Yen) (box, piece, bench, etc.)			

Note 1. Hygiene materials are listed in (2) of the Notification Specified by the Minister.

2. In Remarks column, package unit of materials (unit: sheet, bottle, etc.)

## 8 Required Expenses

		Animal Quarantine Officer Travel Expenses			Allowance Paid to Employed Veterinarians			Medication Expense						Purchasing Expenses of Biological Preparations for Animal Use	Hygiene Material Purchase or Lease Expenses	Total Expenses
		Number of Persons (Total)	Unit Price	Amount	Number of Persons (Total)	Unit Price	Amount	Disinfectant	Inspection Medicine	Medication	Slaughter Disposition Medicine	Infection Prevention Medicine	Total			
Inspection Project	Clinical Inspection	persons	yen	yen	persons	yen	yen	yen	/	/	/	yen	yen	/	yen	yen
	Thorough Inspection															
	Total															
Meeting Expenses								/	/	/	/	/	/			
Injection Projects									/	/	/	/	/			
Dipping /Medication									/	/	/	/	/	/		
Outbreak of Parasitic Diseases Prevention Project	Inspection Project								/	/	/	/	/			
	Dipping/Medication								/	/	/	/	/	/		
	Total								/	/	/	/	/	/		
Total																
Share of Expense Categories	National Expense															
	Pref. Expense															

Note 1. Categories of clinical inspections, thorough inspections and injection projects are the same as those in “4 20xx Implementation Plan.”

- Projects concerning parasitic diseases should be entered by batch in the Outbreak of Parasitic Diseases Prevention Project and not in other columns.
- In the Amount of Money column, the total required amount should be entered and in the left-hand column, the amount borne by the national treasury (breakdowns) should be entered in round brackets ( ).
- Categories of medications, including for disinfection and inspection, are the same as those of 5 Medicine Use (Purchase) Plan and 6 Biological Preparations for Animals Use (Purchase) Plan.

**9 Animal Quarantine Officer Appointment Status**

As of MM DD, YYYY (Unit: Person)

Total A+B+C +D	Veterinarians													Non- Veterinarians D			
	Total A+B+C	Local Government									Private Organizations				Individual Medical Care C		
		Total A	Prefecture						Health Center	Municipality	Others	Total B	Agricultural Mutual Relief Association			Agricultural Cooperatives	Others
			Main Office			District Agricultural and Forestry Office	Livestock hygiene service center	National Institute of Animal Health									
Livestock Hygiene	Public Health Related	Others															

- Note 1. Agriculture mutual relief groups are persons working for agricultural mutual relief organizations excluding veterinarians designated by organizations and part-time veterinarians.
2. Non-full-time employees who work for jobs in several divisions are aggregated as staff members of the main division.

**Appended Form 3**

**Domestic Animal Quarantine Plan Change Plan (Prevention Projects and Spread Prevention Project)**

- 1 Type of Domestic Animal Infectious Disease and Species
- 2 Outbreak Status and Quarantine Measures
- 3 The details of quarantine Measures (Name of the region and the duration of restriction of movement, name of the region and the duration implementing quarantine inspection should be entered.) Unnecessary in case of Outbreak Prevention Project.
- 4 Reasons why the project implementation is required
- 5 Project Plan

(1) Summary of Implementation in Project Implementation Regions

Project Category	Disease Category	Name of Implementation Municipality	Breeding Status (Species)		Originally Planned Volume	Changed Planned Volume	Increase or Decrease	Summary
			No. of Houses	No. of Birds				
			Farms	No. of Birds	No. of Birds	No. of Birds	No. of Birds	
			As above	As above	As above	As above	As above	
			As above	As above	As above	As above	As above	
			As above	As above	As above	As above	As above	

			As above As above					
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- Note 1. Project and Disease Categories columns should be classified pursuant to Appendix Form 2-4 Table. However, for the Disinfection project in the Spread Prevention Project, the Disinfection Project column should be set in the Project Category and the number of implementation farms should be entered in the Changed Planned Volume column. For Disposition to slaughter and Incineration or Burial Projects, Slaughter and Incineration or Burial Projects should be set in the Project Category and the No. of Implementation Animals/Birds in the Changed Plan Volume column.
2. Original plan project volume is unnecessary for the Spread Prevention Project

(2) Infectious diseases in domestic animals Prevention Project Change Plan

The Original Plan and Changed Plan (upper section) should be entered separately in two sections in the Project Name and Total columns of Appended Form 2-4. However, disinfection, disposition to slaughter, incineration and burial of animal quarters should be respectively in the Disinfection Project, Disposition to Slaughter Project and Incineration Project set next to the Outbreak of Parasitic Diseases Prevention Project column of the table.

(3) Medicine usage plan

The Original Plan and Changed Plan (upper section) should be entered separately in two sections in the Medicine and Total columns of Appended Form 2-5. However, the Disinfection Usage Plan requiring disinfection of animal quarters should be entered in the Disinfectant for Animal Quarters column next to the Dipping and Medication Medicines of the table.

(4) Biological preparations for the animal use plan

The Original Plan and Changed Plan (upper section) should be entered separately in two sections in the Name of Biological Preparations and Total columns of the Appended Form 2-6 Table.

(5) Hygiene Material Use Plan

The Original Plan and Changed Plan (upper section) should be entered separately in two sections in the Material and Total columns of the Appended Form 2-7 Table.

(6) Required Expenses

The Original Plan and Changed Plan (upper section) should be entered separately in two sections in the column of Appended Form 2-8 Table. However, for the purchase of disinfectant required to disinfect the animal quarters, hygiene materials required for the disposition to slaughter, incinerate and bury should be respectively entered in the Disinfection Project, Disposition to Slaughter Project and Incineration Project set next to the Outbreak of Parasitic Diseases Prevention Project column of the table.

6 Other References

**Appended Form 4**

**Fowl Brood Inspection Certificate Format**

B-6 Size

Prefecture		Issue Number No.		Fowl Brood Inspection Certificate	
Ownership (Manager) Name and Address					
Inspection Place		Inspection Date (year, month, day)		Date (year, month, day)	
No. of Reared Groups		No. of Inspected Groups		Others	
<p>Following the fowl brood inspection, this certifies that the honeybees above are not abnormal.</p> <p>Date: _____</p> <p style="text-align: right;">XXXX (Certified by)</p>					
Names of Destination and Consignee					
Origin (Station or Port) Name		Arrival place (Station or Port) Name		Movement Method and Route	
<p>Note 1 This certification should be always brought with yourself and immediately submitted to a prefectural governor or the Director of the nearest livestock hygiene service center.</p> <p>2 The effective period of this certificate is 30 days from the issue date.</p>					

**1 Considerations for Completion of the Form**

XYZ column should refer to the prefectural governor, the Director of the livestock hygiene service center, or an animal quarantine officer.  
(Certified by)

**2 Considerations for Entry in the Form**

(1) Enter the location of the inspected apiary in the inspection site column; the total number of bees possessed/managed by the owner/manager in the No. of Reared Groups; and the number of groups received by the inspection site in the No. of Inspected Groups.

(2) Enter the Issue No. of the Fowl Brood Inspection Certificate.

**Appended Form 5**

**Destination Notification**

Date:

To: Prefectural livestock Section Manager in charge

( ) Branch Office, Animal Quarantine Service

( ) Branch Office

I notify that the following imported livestock is sent as follows:

Please see attached documents for inspection results at the Animal Quarantine Service.

Note

1 Types and Species

[1]

[2]

[3]

2 No. of Animals/Birds

[1] Males: , Castarians: , Females: , Total:

[2] Males: , Castarians: , Females: , Total:

[3] Males: , Castarians: , Females: , Total:

3 Transfer Date: MM DD, YYYY

4 Shipment Country:

5 Quarantine Period: MM DD, YYYY – MM DD, YYYY

6 Destination Details

Import Quarantine Certificate Number	Destination	Destination Name	No. of animals/ birds	Quarantine Number	Remarks

Note 1. If the description is too long to be entered here, another document should be used.

2. In case of horses for breeding, stallions and mares should be described separately.

- 7 Monitored infection disease detected during the quarantine period, abnormal findings. Etc. and the status of measures against them

Quarantine Number	Individual Sign	Disease Name/Abnormal Findings	Outcome	Summary

Note 1. If the description is too long to be entered here, another document should be used.

2. Write a determination date and the methods of the exposed disease.

**Attachment**

**Inspection results of Imported Animals**

Quarantine Number			
[1] Special remarks in clinical findings			
[2] Various inspection results			
Disease Name	Inspection Method and Results	Disease Name	Inspection Method and Results
[3] Implementation status including medication at the Animal Quarantine Service			
Medication name	Implementation Date	Note	

(Reference 1) Inspection Results in the Importing Country

Disease Name	Inspection Method and Results	Disease Name	Inspection Method and Results

(Reference 2) Implementation Status including Medication in the Importing Country

Disease Name	Implementation Date	Note