

Specific Domestic Animal Infectious Disease Quarantine Guidelines Concerning Foot-and-Mouth Disease

November 20, 2015
Publicly announced by the Minister of
Agriculture, Forestry and Fisheries
Partially amended: September 11, 2019

Preface

1. Foot-and-mouth disease is a typical example of “transboundary animal diseases (TADs)” defined as “those that are of significant economic, trade and/or food security importance for a considerable number of countries of the outbreak, which can easily spread to other countries and reach epidemic proportions and where control/management, including exclusion, requires co-operation between several countries” by international organizations such as the Food and Agriculture Organization of the United Nations (FAO).
2. Since foot-and-mouth disease has a strong transmission potential, once spread, it could cause the following:
 - (1) A decline in productivity in the livestock industry for an extended period;
 - (2) Jeopardizing the stable supply of livestock to citizens;
 - (3) Causing a serious blow to regional society and the economy; and
 - (4) Risk of losing international trust as a country not free from foot-and-mouth disease and thus, it is necessary to continuously maintain free status in future:
3. Currently, outbreaks of foot-and-mouth disease are repeatedly found in neighboring countries of Japan and the increase of international flow of people and objects is increasing the risk of foot-and-mouth disease invading Japan in future.
4. Therefore, there is a need to thoroughly implement border quarantine with the cooperation of citizens and travelers, etc., based on the premise that foot-and-mouth disease may enter Japan and have the owners (if there is a person other than the owner that manages such domestic animals, such person; the same applies hereinafter) of domestic animals (meaning cattle, water buffalo, deer, sheep, goat, pigs and wild boar; the same applies hereinafter), administrative organs (meaning the State, prefectures and municipalities) and related organizations closely cooperate and establish an effective quarantine system.

5. The guidelines will be reviewed as needed when there are any changes in the state of outbreak of foot-and-mouth disease in foreign countries or any advances in scientific knowledge or technology, etc. In addition, the guidelines will be re-examined at least every three years.

Section 1. Basic policies

1. It is crucial that quarantine measures against foot-and-mouth disease include “prevention of outbreak”, “early discovery and notification” and “quick and accurate initial quarantine response”.
2. The State will thoroughly implement quarantine measures at the border to prevent foot-and-mouth disease viruses entering from foreign countries into Japan via people and objects.
3. First and foremost, owners of domestic animals must comply with the Standards of Rearing Hygiene Management and get into the habit of always notifying prefectures when domestic animals are show suspected symptoms of foot-and-mouth disease.

Accordingly, administrative organizations and related organizations, under the following roles, will ensure they work to prevent any outbreak and prepare for the same so that all domestic animal owners can understand and implement the importance of the role.

- (1) The State shall provide the necessary information to prefectures as well as guidance and advice to allow all prefectures to maintain a high quarantine benchmark and proceed with the study on foot-and-mouth disease conducted by the National Institute of Animal Health, National Agriculture and Food Research Organization (hereinafter referred to as “NIAH”).
- (2) Prefectures shall strive to provide the necessary information to the owners of domestic animals and prepare in case of an outbreak.
- (3) Municipalities and related organizations will strive to provide the necessary information for prefectures to pass on to the owners of domestic animals and prepare in case of any outbreak.

4. In the event of an outbreak, it is important to prevent the spread and terminate it early with a swift and accurate initial quarantine response, in particular, pursuant to the provision of Section 4, Item 2, it is crucial to promptly slaughter affected animals and suspected affected animals in farms where such animals are confirmed and dispose of and disinfect their carcasses.

The State will pay for the cost of such quarantine measures pursuant to the provision of Articles 58 to 60-2 of the Act on Domestic Animal Infectious Diseases Control (hereinafter referred to as the “Act”).

In addition, in Article 60-3 of the Act, to ensure that quarantine measures are taken promptly and accurately from an early stage of the outbreak, the budget based on the Act, including the use of reserve funds, must be dealt with promptly and reliably.

In response, the administrative body and related organizations shall implement quick and accurate initial quarantine response under the following division of roles:

(1) The Ministry of Agriculture, Forestry and Fisheries (MAFF) is responsible for deciding on and reviewing quarantine policy (quarantine policy in 5-2-(1); hereinafter the same), that stipulates first-time quarantine measures, etc. It supports concrete prevention measures in prefectures with the cooperation of related ministries and agencies. In addition, it pays the budget promptly and reliably in accordance with the Act.

(2) Prefectures shall strive to provide the necessary information to the owners of domestic animals and prepare in case of any outbreak.

(3) Municipalities and related organizations shall cooperate with specific quarantine measures implemented by prefectures. (If prefectures entrust the implementation to municipalities or related organizations, the national government shall bear the expenses for quarantine measures in accordance with the Act.)

5. Furthermore, when the State is unable to prevent infection expanding due to the initial quarantine response based on the established quarantine policy in advance, the State shall promptly review quarantine policy based on the actual infection status and, if necessary and while hearing feedback from experts, formulate the emergency quarantine guideline for specific domestic animals for infectious diseases (hereinafter referred to as the “Emergency Quarantine Guideline”).

Section 2. Previous arrangement to prevent outbreak and in preparation for the same

1. Efforts of MAFF

- (1) Through mutual exchange of information with other countries and international organizations such as the World Organization for Animal Health (OIE), the latest outbreak status in overseas shall be identified at all times and information provided to prefectures and related organizations as necessary. At the same time, by publicizing through the website, etc., the necessary information shall be informed to producers, foreign travelers, foreign workers, foreign technical intern trainees, international students, persons concerned at veterinary and zootechnical colleges and other relevant information will be informed.
- (2) Summarizing the characteristics of foot-and-mouth disease, specific precautions to prevent the entry of viruses into farms (limited to domestic animal farms, the same shall apply hereinafter) and quarantine measures assumed at the time of outbreak in an easy-to-understand form and publishing on the website.
- (3) Thoroughly disinfecting import quarantine of livestock and livestock products at air and seaports and on the shoe soles of arrivals or returnees. In particular, taking into consideration the period during which the virus can propagate, asking questions, examining and thoroughly disinfecting their belongings of arrivals or returnees from the country in which foot-and-mouth disease has broken out.
- (4) Providing necessary guidance and advice to prefectures to understand the implementation status of quarantine measures and arrangements in preparation for an outbreak in each prefecture and situations of cooperation with municipalities, the police, the Japan Self-Defense Forces (JSDF), the Japan Veterinary Medical Association (JVMA), producer Teams, etc. and addressing efforts to maintain the quarantine level at a high standard.
- (5) Regularly holding quarantine exercises for all prefectures to identify and resolve problems.
- (6) To be able to dispatch quarantine specialists and support teams, etc. to the site as soon as an outbreak occurs, a dispatching system that always includes training candidates for dispatching candidates shall be established

and dispatch candidates shall be listed in advance. In addition, if necessary, support shall be given for human resource development of prefectural animal health inspectors.

(7) After collecting information on vaccines being effective against viruses isolated in neighboring countries, considering vaccines that are likely to be used when necessary and stockpiling sufficient vaccine.

In addition, given the various serotypes of foot-and-mouth disease virus, even if it is the same type, if the mutation of the epidemic strain proceeds, the effect of the vaccine may not be expected,

(i) stockpiling a vaccine is not always effective.

(ii) performance limits apply whereby infections cannot completely be prevented.

All parties are aware of the above.

(8) Stockpiling necessary and sufficient amounts of antiviral materials that reduce the number of viruses discharged when pigs are infected.

(9) When demand for sanitary materials, etc. related to various inspections soars, a system shall be established to ensure these materials can be supplied smoothly and stably.

2. Efforts of Prefectures

(1) Information regarding the status of the breakout provided by 1(1) shall be promptly notified to all owners of domestic animals and related organizations by fax, telephone, email, postal mail, etc. as necessary.

(2) To raise awareness of the need to prevent epidemics among owners of domestic animals, maintaining a high standard of compliance with the Standards of Rearing Hygiene Management and gaining understanding and cooperation of the need to prevent outbreak through the well-known prevention of outbreak, the following measures shall be implemented regularly to owners of domestic animals (meaning deer, sheep, goat, pigs and wild boar, the owners of six or more animals).

(i) On-site inspection at the farm under Article 51 of the Act (shall be implemented, in principle, at least once a year)

(ii) Holding a workshop

Also, for large-scale owners in particular (cows, limited to (those aged 24 months or older (for fattening cattle, limited to those aged 17 months or

older (limited to dairy bull and crossbred cattle; the same applies in (ii) below)) and 200 and more for water buffalo, for cattle (from 4 months or more and less than 24 months old, (for fattening cattle, more than 4 months and less than 17 months old). In the case of deer, sheep, goats, pigs and wild boars, it means owners of 3,000 or more) from the veterinarian in charge pursuant to the provisions of Article 52 of the Act to the prefecture, sufficient guidance shall be provided through regular reports on the status of rearing hygiene management.

- (3) Providing guidance, advice, recommendations and orders based on the Act to an owner of domestic animals that do not comply with Standards of Rearing Hygiene Management.
- (4) Requesting facilities such as hotels and golf courses where arrivals from countries in which foot-and-mouth disease has broken out are likely to visit to sterilize the area at the entrance. Moreover, fully informing the need for compliance with Standards of Rearing Hygiene Management to the organization, host farms and universities, etc. that serve as channels for accepting foreign workers, technical intern trainees, international students, etc. and providing guidance and advice as needed.
- (5) Understanding the necessary information (location of the farm, breeds, rearing numbers, status of securing a burial sites, etc.) for an initial quarantine response for outbreak with respect to the farm to immediately identify the farm within the movement restriction area (referring to the movement restriction area specified in Section 8, Item1(1)(i)) and organizing using a map information system.
- (6) Retaining personnel necessary for quarantine measures to be able to implement a smooth and prompt initial quarantine response to an outbreak while considering the role at the time of the outbreak, besides, adjusting the sites of disinfection points and organizing the map information system, etc. confirming with suppliers for stockpiles of sanitary materials, stored medicine, heavy machinery, etc. and securing a place in which to store dead animals and livestock.
- (7) Efforts shall be made to provide guidance to owners of domestic animals on rearing hygiene management and how to retain the prefectural animal health inspectors necessary to facilitate the initial quarantine response to

any outbreak. After securing full-time prefectural animal health inspectors, assuming a temporary or urgent need, lists will be made to ensure that part-time prefectural animal health inspectors consult with Japan Veterinary Medical Association (JVMA), etc. and also list of keepers who are used to handling cloven-hoofed animals shall be secured to implement slaughtering in the event of an outbreak.

In addition to a list of prefectural animal health inspectors to be dispatched, support in the event of an outbreak in other prefectures shall be provided.

- (8) In case of an outbreak, considering the need to collaborate with neighboring prefectures and cooperate with e.g. municipalities, police, the Japan Self-Defense Forces (JSDF), Japan Veterinary Medical Association (JVMA), producers' Teams, clarifying contact points with those concerned, sharing information of the rearing state of local domestic animals and dividing roles in case of an outbreak, a cooperative system shall be established.

[Point to Be Considered [1]] Maintenance of a collaborative and cooperative system related to countermeasures against wild animals

Prefectures shall strive to maintain a collaborative and cooperative system with administrative organs and related organizations, including departments overseeing domestic animal hygiene and wild animal hygiene through efforts such as surveying the infection status of pathogens of domestic animals and infectious diseases in wild animals from peacetime, since it is necessary to accurately implement measures to prevent the spread of viruses through wild cloven-hoofed animals (hereinafter referred to as "wild animals") and confirm the infiltration status of viruses in wild animals, especially in the event of an outbreak.

- (9) Implementing a practical quarantine exercise according to local circumstances, identifying and resolving issues, as well as striving to train prefectural animal health inspectors to direct quarantine measures at the affected farm to allow those concerned, such as neighboring prefectures, municipalities, police, the Japan Self-Defense Forces (JSDF), veterinary medical associations and producers' Teams to work together to carry out quick and accurate initial quarantine response.

In addition, gathering facilities such as livestock markets and

slaughterhouses will keep in mind the likelihood of being a factor in the spread of infection and work in cooperation with the officials and establish close cooperation with those concerned of these facilities and public health departments shall arrange and prepare during peace time, responding and dividing their roles during outbreaks.

- (10) In the case of outbreak, considering a concrete address to create a consultation service in cooperation with public health departments so that the owners of domestic animals and the quarantine measure personnel are suffering great mental and physical stress.
- (11) In recent years, to expand and facilitate domestic animal management, works of employees has been subdivided. In light of the many farms entrusted to private veterinarians for hygiene management guidance on the farm, to prevent foot-and-mouth disease and detect it at an early stage, cooperation between a livestock hygiene service center, private veterinarians and private inspection organizations shall be strengthened regularly.
- (12) The following measures shall be taken when a burial site of an owner of domestic animals is not sufficient in advance.
- (i) Providing information on available land to said owner of domestic animals.
 - (ii) In cooperation with municipalities, related organs and related organizations, available public land should be specifically determined for each region. In addition, if the prefectural governor deems it necessary, he/she requires the cooperation of the Minister of Agriculture, Forestry and Fisheries and the mayor of the municipality pursuant to the provisions of Article 21, Paragraph (7) of the Act.
 - (iii) When an incineration facility or a rendering process facility (hereinafter referred to as "incineration facility, etc.") is available, the incineration facility, etc. should be included on a list and use of the incineration facility etc. should be coordinated with prefectures, municipalities, etc. that have jurisdiction over its location, in advance.
 - (iv) Determining of a means of transportation and routing to a public area of land or incineration facility, etc. Furthermore, explanation should be given to residents as needed.
- (13) Efforts should be made to extend the term of office of the official overseeing quarantine of the prefectural competent livestock department

and if the official overseeing quarantine changes, a sufficient transition period for takeover should be secured. In addition, they should strive to ensure that records and experiences related to quarantine response are handed over to those concerned appropriately by taking opportunities such as quarantine exercises.

3. Efforts of municipalities and related organizations

(1) Cooperating with the efforts of prefectures prescribed in 2.

(2) Providing support for outbreak prevention efforts by domestic animal owners.

Section 3. Discovery of abnormal domestic animals and implementation of inspection

1. Responses to be made when notification is received from owners of domestic animals

When a prefecture receives a notification concerning finding of abnormal domestic animals (hereinafter referred to as “abnormal domestic animals”) showing symptoms suspected of foot-and-mouth disease (hereinafter referred to as “clinical signs”) from an owner of domestic animals or veterinarian, the prefecture shall report to 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”) and immediately dispatch a prefectural animal health inspector to the on-site farm.

The prefecture must also instruct persons having issued such notifications, etc., including a voluntary ban on moving domestic animals reared at the farm or carcasses of domestic animals.

[Point to Be Considered [2]] Reporting to be made when notification is received regarding abnormal domestic animals.

When the prefectural competent livestock department receives a notification concerning domestic animals showing clinical signs has been found from an owner of domestic animals or veterinarian, a report shall be issued to the Animal Health Division in Appended Form 1. In addition, the report should be made regarding matters that have been confirmed and matters requiring time to confirm shall be reported as soon as confirmed.

[Point to Be Considered [3]] Tools carried on site by prefectural animal health inspector

1. On-farm clothing: boots, quarantine clothing, gloves, shoe covers, medical caps, dust-proof masks, etc.
2. Clinical laboratory equipment: scrubbing brush, thermometer, retention device (including nasal forceps and opener), wire, rope (for retention), white cloth (used to immerse in disinfectant and place three devices on it), tranquilizer, flashlight, tally counter, color spray, etc.
3. Simple test equipment: foot-and-mouth disease virus antigen detection kit, etc.
4. Equipment for pathological appraisals and collecting materials: surgical

scissors, scalpel, hooked forceps, material delivery bottle, material preservative liquid, blood collecting device (blood-sampling needle, blood-collecting tube, blood collection tube holder, etc.), probang cup, cotton swab, alcohol cotton, cold and heat insulation materials, cooler boxes, carrier box of pathology materials, etc.

5. Communication and recording equipment: mobile phone, office supplies, various forms of paper, maps, waterproof digital cameras, picture transmitter, etc.

6. Disinfecting equipment: bucket, brush, disinfectant, disinfectant spray, etc.

7. Others: gummed tape, plastic bag, vinyl tape, felt tip pen, utility knife, scissors, no entry sign, spare clothes, grocery etc.

[Point to Be Considered [4]] Matters related to guidance provided by prefectures

1. When notified by owners of domestic animals

- (1) For all animals, including those other than cloven-hoofed, voluntarily refraining from moving from the farm.
- (2) Outflow of materials draining from the farm shall be prevented as far as possible, unless it has been properly purified in an activated sludge tank, etc. and appropriate disinfection measures have been taken.
- (3) Only one farm gateway shall be allowed and no person other than those related to the farm and quarantine is allowed to enter.
- (4) Nothing shall be carried away from the farm. When domestic animal owners and employees go out, perform appropriate disinfection.
- (5) Products such as raw milk and semen, excrement and bedding of abnormal domestic animals and said domestic animals must be isolated.

2. When notified by veterinarians

- (1) In principle, he/she shall stay on the farm until the prefectural animal health inspector arrives on-site and give advice and guidance from (1) to (5) to prevent the spread of the foot-and-mouth disease virus.
- (2) When leaving the farm after the prefectural animal health inspector arrives, disinfect not only his/her body but also his/her clothing, shoes, glasses and other belongings and vehicles and immediately return home.
- (3) After returning home, thoroughly clean and disinfect the inside and outside of the vehicle and wash clothes, bathe and wash the body thoroughly.

- (4) The rearing facility for cloven-hoofed animals shall not be entered until it is determined that the abnormal domestic animals are not affected or suspected of being affected.
- (5) When it is determined that the foot-and-mouth disease is found, the rearing facility of cloven-hoofed animals shall not be entered (excluding the farm) for seven days from the day when the abnormal domestic animals are examined, or the carcasses are examined.

3. When notified by livestock markets

- (1) Voluntarily refraining from allowing domestic animals to move and notifying those who enter and leave the domestic animal market as necessary.
- (2) Domestic animal-related vehicles shall voluntarily refrain from entering. In addition, such vehicles shall be disinfected thoroughly and the cloven-hoofed animals shall not be allowed to enter or leave their facility until the abnormal domestic animals are determined not to be among the animals affected or suspected of being affected.
- (3) When employees, etc. (referring to all persons who entered the livestock market when the notification of abnormal domestic animals is received, the same applies when notification is received from the domestic animal market) move, their bodies and vehicles shall be appropriately disinfected.
- (4) Employees and persons among those who received the information provided in (1), such as employees, those who entered the domestic animal market after the date of carrying an abnormal domestic animal (hereinafter referred to as "market visitors") shall not be allowed to enter the cloven-hoofed animals facility until it is determined that the abnormal domestic animal is not among the animals affected or suspected of being affected.
- (5) In principle, the owner of the abnormal domestic animal shall be identified immediately and after full disinfection, he/she shall be instructed to return home immediately and given advice and guidance from (1) to (5).
- (6) The vehicle and driver used to ship the abnormal domestic animal shall be identified and thoroughly disinfected and guidance given to enter or leave the rearing facility of cloven-hoofed animals (except for abnormal domestic animals shipping farms and farms owned by drivers) until it is determined that the abnormal domestic animal is not among the animals affected or suspected of being affected. In addition, drivers shall be

instructed to avoid entering the farms they own as far as possible.

- (7) A destination to which the domestic animals can be moved from the livestock market should be identified the day after the abnormal domestic animal is brought in.
- (8) If foot-and-mouth disease is diagnosed, market visitors shall be informed not to enter the facilities of cloven-hoofed animals (excluding the shipping farm of abnormal domestic animals or farms owned by the market visitor) for 7 days after the day when an abnormal domestic animal is determined not to be among an affected animal or suspected affected animal. In addition, guidance shall be given to avoid entering the farm owned by the market visitor as far as possible.

4. When notified by slaughterhouses

- (1) Slaughtering of abnormal domestic animals and domestic animals shipped from the same farm shall be stopped and information provided to those who enter and leave the slaughterhouse as necessary.
- (2) Entering livestock-related vehicles shall voluntarily be refrained from. In addition, livestock-related vehicles, once vacated, shall be thoroughly disinfected and no entry to or exit from rearing facilities of cloven-hoofed animals shall be allowed until it has been confirmed that the abnormal domestic animal is not among the affected animal or suspected affected animal.
- (3) When employees, etc. (meaning all persons who entered the slaughterhouse at the time of notification of an abnormal domestic animal; hereinafter the same applies when notified by the slaughterhouse) move, appropriate disinfection shall be ensured for the body and vehicles.
- (4) Those who entered the slaughterhouse after the date of carrying the abnormal domestic animal (hereinafter referred to as "slaughterhouse visitors") among employees, etc. and those who received the information provided in (i) shall not enter the rearing facilities of cloven-hoofed animals until the abnormal domestic animal is confirmed as not being an affected animal or suspected affected animal.
- (5) The owner of an abnormal domestic animal shall be immediately identified and instructions to return home immediately shall be given after sufficient disinfection and guidance (i) to (v) have been given.
- (6) The vehicles and drivers used to ship the abnormal domestic animal shall be identified, thorough disinfecting shall be conducted and instructions not to enter and leave rearing facilities of cloven-hoofed

animals (excluding the shipping farm of an abnormal domestic animal or the farm owned by the driver) shall be given. In addition, guidance to avoid entering the farm owned by the driver shall also be given as far as possible until the abnormal domestic animal is confirmed as not being an affected animal or suspected affected animal.

- (7) If it is determined that foot-and-mouth disease is found, slaughterhouse visitors shall issue instructions to refrain from entering the facilities of cloven-hoofed animals (excluding the shipping farm of an abnormal domestic animal or the farm owned by the slaughterhouse visitor) for 7 days after the day when the abnormal domestic animal is confirmed as not being an affected animal or suspected affected animal. In addition, guidance shall be given to avoid entering the farm owned by the slaughterhouse visitor as far as possible.

2. Clinical inspection by prefectures

- (1) After arriving at a farm mentioned in 1, a prefectural animal health inspector shall park the vehicle outside the hygiene management area of the farm, enter the animal quarters wearing quarantine clothing and carry out thorough clinical inspection (including measurement of body temperature) centered on nasal cavities, lips, oral cavities, tongues, hooves, nipples, etc. (hereinafter referred to as “frequent sites”) of abnormal domestic animals and other domestic animals kept together with them.

At that time, the lesion sites and frequent sites of all abnormal domestic animals (several heads with clear symptoms if there are many abnormal domestic animals) shall be taken with a digital camera clearly and multidirectionally and the status in the animal quarters shall be also assessed to contribute to pathological appraisal, etc.

In addition, if blisters are confirmed at a frequent site, a prefectural animal health inspector shall use a kit that specifically detects antigens of the foot-and-mouth disease virus (hereinafter referred to as “antigen detection kit”) as necessary.

- (2) As soon as a clinical inspection is completed, a prefectural animal health inspector shall report the symptoms, etc. from the farm or nearest office and the results shall be sent to the prefectural competent livestock department in charge by email if the photographed photo and antigen detection kit are used.

- (3) When the prefectural competent livestock department confirm any of the

following symptoms (hereinafter referred to as “specific symptoms”) as results of a clinical inspection by a prefectural animal health inspector, photos of an abnormal domestic animal, symptoms, the status of domestic animals living together and results of the antigen detection kit, etc. shall be immediately reported to the Animal Health Division.

- (i) Having a temperature of 39.0 °C or higher, foamy salivation, limping, astasia, drastic decrease in milk yield or cessation of lactation and in the oral cavity, lips, nasal cavity, nose, hooves, nipples or breasts (hereinafter referred to as “in the oral cavity, etc.”) blisters, erosions, ulcers or scars (excluding those caused by trauma; hereinafter referred to as “blisters, etc.”) (In the case of deer, having a temperature of 39.0 °C or higher and blisters, etc. in the oral cavity, etc.).
 - (ii) Having blisters, etc. in the oral cavities, etc. of multiple domestic animals in the same cattle chamber (in the same animal quarters if one domestic animal is reared in one cattle chamber).
 - (iii) More than half the sucklings in the same cattle chamber (sucklings in the multiple adjacent cattle chamber if one suckling is reared in a single cattle chamber) die for two days on and before that day. Provided, however, that this shall not apply to cases where it is clearly attributable to circumstances other than foot-and-mouth disease, such as failure of facilities for rearing management of domestic animals, rapid changes in temperature, fire, storms and floods and other emergency disasters.
- (4) If there is a report according to (iii), the Animal Health Division shall instruct the prefectural competent livestock department to use the antigen detection kit as necessary based on the information sent. In addition, the prefectural competent livestock department shall report on the results of the antigen detection kit to the Animal Health Division.
- (5) Based on the reports in (iii) and (iv), the Animal Health Division shall request submission of specimens according to 3. If necessary, observation according to 7 shall be instructed.

[Point to Be Considered [5]] Matters on taking photos of an abnormal domestic animal

- 1. An abnormal domestic animal shall be checked for the presence or absence of all frequent sites of lesions, clear photos of the lesions shall be taken and photos of the frequent sites shall also be taken regardless of the

presence or absence of lesions. In addition, photos of the whole body shall be taken from the perspective of checking the whole body state. However, if a prefectural animal health inspector who has performed an on-site inspection strongly suspects foot-and-mouth disease due to clinical signs, etc., taking photos of only the frequent sites where typical lesions are seen and sending them may be performed in advance.

Based on these, for an abnormal domestic animal, photos at least listed in (1) and (2) below shall be taken and sent. In addition, the lesions shall be photographed at multiple angles so that the state can be confirmed. Furthermore, information on the scope for contact between an abnormal domestic animal and other domestic animals (such as the status of living together) is also necessary to presume the possibility of foot-and-mouth disease, so taking photos that show the appearance of the animal quarters, the status of living together in the cattle chamber, the positional relationship with the adjacent cattle chamber, etc. and sending them shall be performed after confirming the recent movement status in the farm of an abnormal domestic animal.

(1) Cattle

- (i) Appearance (photos of the whole body shall be taken before the mouth opening inspection)
- (ii) Head (photos of the sites showing the status of salivation around the lips shall be taken before the mouth opening inspection)
- (iii) Upper lip (mucosal surface), dental plate
- (iv) Palate
- (v) Tongue (front and back. Photos of at least the front shall be taken, even if there is no lesion.)
- (vi) Nose (nasal speculum, cavity)
- (vii) Hoof (coronet and interdigit. Photos of at least one limb shall be taken even if there is no lesion.)
- (viii) Nipple

(2) Pig

- (i) Appearance (whole body)
- (ii) Tongue
- (iii) Nose (nose tip)
- (iv) Hoof (coronet and interdigit. Photos of at least one limb shall be taken, even if there is no lesion.)
- (v) Nipple

2. Multiple shots per site shall be taken and clear photos shall be confirmed on the screen of a personal computer or by enlarging the images on a

digital camera. In addition, the size for each photo shall be at least 1,024 pixels or more on the long side and 768 pixels or more on the short side (equivalent to 800,000 pixels or more).

3. When sending photos, the presence or absence of the lesion shall be clarified for each photo and if there is a lesion, findings of the prefectural animal health inspector for the lesion shall be attached. In addition, if taking multiple heads, clear identification of which photo refers to which individual shall be ensured.

4. In addition, if you are wondering whether it is a specific symptom of Section 3, Item 2(3) of the Quarantine Guidelines, or even when it is determined by the prefecture that it is not a specific symptom, photos shall be taken in the same way and sent (excluding for the case of the proviso of Section 3, Item 2(3)(iii) of the Quarantine Guidelines).

[Point to Be Considered [6]] Report on symptoms, etc. of an abnormal domestic animal

The prefectural competent livestock department shall report to the Animal Health Division in Appended Form 2 concerning information on the symptoms of an abnormal domestic animal. Depending on the content of the report, requests may also be made to send samples based on Section 3, Item 3(4) of the Quarantine Guidelines, so the contents of the inspection shall be reported immediately, if there are matters that require time to confirm, these shall be additionally reported as soon as confirmation is obtained.

[Point to Be Considered [7]] Guidance matters when the reason for death is clearly attributable to circumstances other than foot-and-mouth disease

Even if it is clear that the cause of the death of an domestic animal is due to circumstances other than foot-and-mouth disease such as failure of equipment for rearing and managing domestic animals, sudden changes in temperature, fire, wind and flood damage, other extraordinary disasters, etc., for a certain period of time (about one week in general), observation shall continue to assess the presence or absence of clinical signs, mainly around the dead pigs and instructions shall be given to notify to a livestock hygiene service center when an abnormal domestic animal is confirmed.

3. Sending samples

By the report of 2(2), when any of the following circumstances apply to domestic animals reared at the farm of 2, the prefecture shall collect materials of blister fluid, blister epithelium, lesion swabs, the blood of the domestic animal as samples collected from blisters, etc. in the oral cavity, etc. of the domestic animal appropriately and in consultation with the Animal Health Division in advance, the samples shall be brought to NIAH.

- (1) When domestic animals exhibiting specific symptoms are confirmed in multiple cattle chambers;
- (2) When one domestic animal is reared per one cattle chamber, if a domestic animal exhibiting a specific symptom is confirmed in multiple adjacent cattle chambers;
- (3) When the antigen detection kit reveals a positive result;
- (4) When the Animal Health Division requests the submission of samples.

[Point to Be Considered [8]] How to collect and send samples

1 Materials for virological tests

For tissue-sampling of sites showing blisters, ulcer, erosions, crusts, etc., 0.5 g or more of the test material is required, so lesions such as nasal cavity, oral cavity, tongue, hoofs or tissue materials of two or more individuals can be pooled.

In addition, the collected test materials should be placed in a sterilized and highly airtight tube, etc. and all diluted solution and medium use Dulbecco's PBS (-) pH7.4 (± 0.2) (DPBS) and no glycerin is added (ensuring a pH of 7.2 to 7.6).

- (1) When blisters are observed:

The blister fluid shall be aspirated with a syringe and placed into a tube, etc. without DPBS and transported while refrigerated (4°C).

In addition, the blister epithelium shall be put in DPBS and transported while refrigerated (4°C).

- (2) When blisters are broken and the dermis is exposed, but blister epithelium can be confirmed, or when ulcer, erosions, crusts, etc. may be confirmed;

When it is possible to remove lesions such as blister epithelium or ulcer, erosion, scab, etc., shall be put in DPBS and transported keeping it refrigerated (4°C). When it cannot be removed, wipe the blisters and exposed dermis, ulcers, erosions, crusts, etc. with a cotton swab, etc. and put in DPBS 2ml (amount that the swab etc. can be surely soaked) and

transported keeping it refrigerated (4°C).

(3) Others

When the Animal Health Division gives an instruction, esophageal/pharyngeal fluid shall be collected using a probang cup. After mixing the DPBS and esophageal/pharyngeal fluid in equal amounts, sealing tightly and immediately disinfecting the outside of the container with an appropriate disinfectant, etc., it shall be rapidly frozen at -70°C or lower using dry ice or liquid nitrogen and transported while frozen at (-70°C or lower).

2. Materials for the serological test

Collecting blood using a vacuum blood collection tube containing a separating agent, transporting it after keeping it refrigerated (4°C). If a vacuum blood collection tube containing heparin is used, a non-specific reaction is very likely to be observed in the solid-phase competition ELISA, precluding its use for examination. In addition, if the blood is frozen and hemolyzed, it cannot be used for examination. Storage and transportation methods shall be considered to prevent freezing.

3. Transportation of materials

(1) To prevent the pH of the materials from lowering and inactivating the virus, the container containing the collected materials should be tightly sealed and the outside shall be properly sterilized. All esophageal and pharyngeal fluid should be transported while refrigerated (4°C) and esophageal and pharyngeal fluid should be transported while frozen (-70°C or lower) using dry ice. In addition, when using dry ice as a coolant, including the following matters, it shall be handled carefully, including confirming the transportation method with the airline expected to be used for transportation in advance.

- (i) Dry ice must not be put in the primary container (that directly housing the sample) and the secondary container (the sealed container).
- (ii) Using a tertiary container (exterior container) for housing dry ice that can dissipate the vaporized gas.
- (iii) Indicating that dry ice is used on the surface of the exterior container. At the same time, attaching a warning label for dry ice (UN1845) indicated in the "Guidance on regulations for the transport of infectious substances".

(2) When carrying them into the National Institute of Animal Health, National Agriculture and Food Research Organization (the Exotic Diseases

Research Facility (Kodaira City, Tokyo). hereinafter referred to as “NIAH”), after contacting in advance, the contact person shall bring them directly. In addition, selecting the fastest and reliable method of transportation, such as air transportation and being sure to attach a pathological appraisal request form (Appended form 3) to the specimen.

4. Precautions when collecting materials

When materials shall be collected, to prevent the disease virus from being disseminated and avoid contaminating the laboratory, careful attention should be paid to the risk of contamination by touching the surrounding objects with hand touching the affected area at the time of collection and the outside of the container should be thoroughly disinfected.

In addition, instruments used for collecting materials, preprocessing materials for antigen detection kits and residual materials, etc. shall be disinfected and taken back to the livestock hygiene service center and subject to proper disposal such as sterilization and incineration.

4. Measures to be taken at farms

- (1) When a prefecture has sent samples to NIAH pursuant to above 3, the prefecture must provide sufficient explanation on possible quarantine measures to the owner of the domestic animals of the farm above 2, while immediately taking the following measures after consulting with the Animal Health Division.
 - (i) Movement of the following items of the relevant farm shall be restricted pursuant to the provisions of Article 32, paragraph (1) the Act:
 - (a) Live domestic animals
 - (b) Raw milk
 - (c) Semen and fertilized eggs collected
 - (d) Carcasses of domestic animals
 - (e) Domestic animal manure, etc.
 - (f) Litter, feed and livestock-rearing equipment
 - (ii) Entry of persons other than relevant persons into the relevant farm shall be restricted.
 - (iii) The entrance to the relevant farm and clothing and rearing instruments used at the relevant farm shall be disinfected.
- (2) When a prefecture has sent samples to NIAH pursuant to 3 above, it must submit the following information of collecting the relevant farm concerning

the past 21 days as well as identifying the suspected affected animals of Section 4, Item 2(2) or the epidemiology-related domestic animals of Section 11, Item 1(2) to the Animal Health Division.

- (i) Entry or departure of reared animals
- (ii) Range of movement of the following persons and vehicles having entered and left the relevant farm
 - (a) Persons who work in the hygiene management areas of multiple farms such as farm workers, veterinarians, livestock artificial inseminators and hoof care specialists
 - (b) Vehicles that enter the hygiene management areas of multiple farms, such as livestock carriers, milk trucks, feed carriers, carcass collection vehicles and compost carriers
- (iii) The destination of the compost
- (iv) The destination of the semen and fertilized egg
- (v) Information on feeding

[Point to Be Considered [9]] Reporting epidemiological information on abnormal domestic animal rearing farms

The Prefectural Livestock Division shall report epidemiological information on the farm to the Animal Health Division in Appended form 4.

5. Inspection by NIAH

When samples have been sent from a prefecture pursuant to 3 above, NIAH shall use methods (antigen tests (virus isolation tests, tests using the ELISA Enzyme-Linked Immunosorbent Assay) method and genetic tests, such as RT-PCR (Revers Transcription Polymerase Chain Reaction) and serum antibody tests) according to the stage of the lesion and report the results thereof to the Animal Health Division.

6. Arrangements in preparation for positive test results

When a prefecture has sent samples to NIAH pursuant to 3 above, it must promptly take the following measures and report the details thereof to the Animal Health Division before the results of the genetic tests conducted by NIAH pursuant to 5 above are obtained, at the latest:

- (1) Identifying the location of the animal quarters, etc. in the farm.
- (2) Organizing the rearing state of domestic animals in surrounding farms.
- (3) Securing the personnel and materials necessary for quarantine measures,

such as slaughter of domestic animals (including the need for assistance from the State or other prefectures, in terms of personnel and materials).

- (4) Securing a burial site or incineration facility, etc. for the carcasses of the animals affected or suspected of being affected or a rendering process facility (including the use of large quarantine materials held by MAFF).
- (5) Consideration of the venues for disinfection points.
- (6) Notification to municipalities in which the relevant farm is located, neighboring prefectures and relevant organizations.

[Point to Be Considered [10]] Report on Arrangements in preparation for positive test results

A prefecture conducts on-site surveys on the farm so that arrangements in preparation for positive test results can be carried out smoothly and organized for the layout of buildings on the relevant farm, road widths inside and outside the farm, setting place of tents and materials storage.

The Prefectural Livestock Division shall immediately report the measures taken as arrangements in preparation for positive test results to the Animal Health Division by faxing or emailing in an orderly manner for each item. Any matters concerning the need for support for personnel and materials from the state and other prefectures that require coordination with other organizations shall be reported immediately upon positive test results.

7. Observation

Prefectures shall take the following measures, when the sample is sent into NIAH pursuant to 3 and the Animal Health Division determines that measures 4-(1)-(i), 4-(2) and 6 need not be conducted:

- (1) The relevant farm shall take the following measures for a maximum of two weeks after the specific symptoms have been confirmed. In addition, upon consulting with the Animal Health Division, the content of measures or said period shall be changed in response to status of lesion and status of rearing together:
 - (i) Instructing an observance to stop shipping and movement when the specific symptoms are confirmed pursuant to the provisions of the Standards of Rearing Hygiene Management (taking measures to restrict the movement pursuant to the provisions of 4-(1)-(i), as needed).
 - (ii) Taking measures of 4-(1)-(ii) and (iii).
 - (iii) With the cooperation of domestic animal owners or private veterinarians,

confirming daily clinical signs, body temperature, etc. of domestic animals with specific symptoms and domestic animals in the same animal quarters as said affected animals (when one domestic animal is reared per animal quarter, the animal quarter adjoining that of the relevant affected animal).

- (2) Based on (1)-(iii), when domestic animals with specific symptoms have abnormalities confirmed or domestic animals in the same animal quarters as the relevant affected animals (when one domestic animal is reared per animal quarter, the animal quarter adjoining that of the relevant affected animal) have their clinical signs confirmed, actions in accordance with 1 shall be promptly taken.
- (3) Samples for pathological appraisals shall be collected after the measures of (1), in principle and when there is need to promptly implement, upon consulting with the Animal Health Division, collecting shall be implemented. In addition, at that time, close attention shall be paid to prevent the spread of pathogens.

8. Others

The measures described in 2 to 7 above will also be taken when any abnormal domestic animals are found as a result of on-site inspection, etc. by a prefectural animal health inspector instead of a notification given by such persons as the owner of domestic animals.

In addition, when a prefecture receives a notification stating that an abnormal domestic animal has been found in a slaughterhouse or livestock market, etc., it is to immediately dispatch a prefectural animal health inspector to the relevant slaughterhouse, livestock market, etc. and shipping farm and take measures equivalent to those described in 2 and 4 above. When it emerges that the relevant domestic animal has been shipped from a farm located outside the prefecture in which the relevant slaughterhouse, etc. is located, the slaughterhouse or livestock market, etc. must promptly notify the Animal Health Division and the Prefectural Livestock Division in which the shipping farm is located to that effect and the prefecture having received such notification must immediately dispatch a prefectural animal health inspector to the shipping farm and take measures equivalent to those described in 2 and 4 above.

Section 4. Determination of disease, etc.

The Ministry of Agriculture, Forestry and Fisheries shall determine the disease, etc. pursuant to the methods described in 1 and 2 below.

1. Method for determination of disease

The Ministry of Agriculture, Forestry and Fisheries shall determine the disease pursuant to the methods described in (i) and (ii) below.

- (i) Determination shall be made based on the photographs of the lesion areas, epidemiological information and the results of genetic tests by NIAH in Section 3, Item 5 or the results in Section 3, Item 7 Observation, in light of the opinions of such experts as the Commissioner of the sub-committee on diseases of cattle and pigs, etc. under the domestic animal health committee of the Council for Food, Agriculture and Rural Areas Policies (hereinafter referred to as the “sub-committee”). However, when the clinical signs of foot-and-mouth disease can be clearly identified from the photographs of the lesion areas with respect to domestic animals reared within the movement restriction area described in Section 8, Item 1(1) or domestic animals prescribed in Section 11, Item 1(2), or when it is determined positive by the antigen detection kit, the Ministry shall immediately determine the disease in light of opinions of experts and based on the clinical signs and epidemiological information, without awaiting the results of the relevant test.
- (ii) When a positive result is obtained in the serum antibody tests or virus isolation tests conducted by NIAH, although it was determined negative at the time of determining the disease as described in (i), the Ministry must determine the disease again in light of the opinions of experts.

2. Affected animals and suspected affected animals

The Ministry of Agriculture, Forestry and Fisheries is to determine domestic animals to which any of the following apply as affected animal or suspected affected animal based on the results of determination of disease as described in Item 1 above. The Animal Health Division shall notify the prefectural competent livestock department of the results of the determination immediately after said determination has been made.

(1) Affected animals

- (i) Domestic animals from which the foot-and-mouth disease virus was isolated by viral isolation tests;
- (ii) Domestic animals that have clear clinical signs of foot-and-mouth disease and from which the gene specific to foot-and-mouth disease virus was

- detected by genetic tests;
- (iii) Domestic animals that have clear clinical signs of foot-and-mouth disease and from which the antigen to foot-and-mouth disease virus was detected by serum antibody tests.

(2) Suspected affected animals

- (i) Domestic animals reared in a farm at which an affected animal was found (when an affected animal is found at a slaughterhouse or livestock market, etc., domestic animals that are kept together at the slaughterhouse or livestock market, etc. at the time when the affected animal was found and domestic animals that are reared in the farm that shipped the affected animal);
- (ii) Domestic animals which have clear clinical signs of foot-and-mouth disease, domestic animals determined as positive by the antigen detection kit and domestic animals reared in the farm at which such animals were found within the movement restriction area described in Section 8, Item 1(1)(i), or the farm rearing the epidemiology-related domestic animals as prescribed in Section 11, Item 1(2);
- (iii) Domestic animals reared in other farms at which a person who is directly involved in the rearing and management of domestic animals at a farm at which an affected animal or suspected affected animal (limited to the domestic animals set forth in (ii)) (hereinafter referred to as the “affected farm”) was found, directly conducted rearing and management during the period from the 7th day prior to the day on which the relevant domestic animal was determined as an affected animal or suspected affected animal (if the day of onset of symptoms can be estimated, the day of onset; hereinafter referred to as the “determination date of disease, etc.”) (limited to the domestic animals set forth in (ii)) to the present day;
- (iv) Domestic animals which have been revealed to have had any contact with the relevant affected animal or suspected affected animal (limited to the domestic animals set forth in (ii)) during the period from the 7th day prior to the determination date of disease, etc. to the present day, as a result of the epidemiological study prescribed in Section 11, Item 1(1);
- (v) Domestic animals for which artificial insemination or transfer of a fertilized egg was conducted using semen or a fertilized egg collected from an affected animal or suspected affected animal (limited to the domestic animals set forth in (ii)) during the period from the 7th day prior to the determination date of disease, etc. to the present day, based on the results of the epidemiological study prescribed in Section 11, Item 1(1);

(vi) Domestic animals which have been revealed to have had any contact with an affected animal or suspected affected animal (limited to the domestic animals set forth in (ii)) at a day before the 7th day prior to the determination date of disease, etc. based on the results of the epidemiological study prescribed in Section 11, Item 1(1) and which have been determined by a prefectural animal inspector as at risk of becoming an affected animal in light of the state of onset, etc. of the relevant affected animal or suspected affected animal.

Section 5. Measures to be taken at the time of determination of disease, etc.

1. Notification to relevant parties

- (1) When a prefecture receives a notification stating that a domestic animal has been determined as an affected animal or suspected affected animal pursuant to Section 4, Item 2, the prefecture shall promptly contact by telephone, fax, email, etc. to that effect and once details for the location of the farm where the affected animal or suspected affected animal has been confirmed to the following person:
 - (i) Owner of the domestic animal
 - (ii) Municipalities within the prefecture
 - (iii) Veterinary medical association, Producers' Team and other related organizations in the prefecture
 - (iv) Police, the Japan Self-Defense Forces (JSDF) and other related organizations in the prefecture
 - (v) Neighboring prefectures

[Point to Be Considered [11]] Notification to relevant parties related to the wild animal countermeasures

If a domestic animal is determined as an affected animal or suspected affected animal pursuant to Section 4, Item 2, the Animal Health Division shall contact the Wildlife Division, Nature Conservation Bureau, Ministry of the Environment, the farm that affected animal or suspected affected animal has been confirmed (hereinafter referred to as "affected farm"), and the prefectural livestock division, which includes an area within a 10-kilometer radius of the farm. The prefectural livestock division in the prefecture that has been contacted shall contact the relevant departments of wildlife division, etc. of the prefecture, as well as related organizations such as *JAPAN HUNTERS ASSOCIATION* (hunting associations). In addition, if foot-and-mouth disease virus is detected or if the antibody against foot-and-mouth disease virus is detected from wild animals, it shall be contacted just as well.

- (2) In the case of (1), the prefecture shall provide the detailed location of the farm where the affected animal or suspected affected animal has been confirmed to the farms within a 10-kilometer radius of the farm and any other person deemed necessary by the prefecture.
- (3) When providing information by (2) or when explaining the policy of

providing information in advance, those who receive the information that the information is provided for the purpose of preventing the spread of foot-and-mouth disease shall be notified and the necessary guidance to prevent the use or disclosure of such information for any other purpose shall be provided. Since there is a risk of the information spreading in a disorderly manner, instructions to strictly refrain from posting such information online shall be given.

- (4) When a prefecture receives a notice to the effect that the domestic animal is not an affected animal or suspected affected animal, the owner of the domestic animal and the person specified in Section 3, Item 6(6) shall be contacted. In addition, an inspection of the cause of the abnormality pertaining to the notification shall be conducted and the results shall be explained to the owner of the domestic animal and reported to the Animal Health Division.

2. Holding of the Countermeasure Headquarters and cooperation between the government and prefectures, etc.

- (1) The Ministry of Agriculture, Forestry and Fisheries, after determining that it is an affected animal or suspected affected animal, shall promptly establish the Foot-and-mouth Disease Quarantine Headquarters of MAFF (hereinafter referred to as the “Ministry of Agriculture, Forestry and Fisheries Quarantine Measures Headquarters”) headed by the Minister of Agriculture, Forestry and Fisheries to determine the quarantine policy that sets out the initial response to the quarantine measures. However, when there is special need, it shall be held before the determination of disease.
- (2) The Ministry of Agriculture, Forestry and Fisheries shall dispatch the following employees, etc. to the infected prefectures with the cooperation of NIAH, the National Livestock Breeding Center and other related organizations:
- (i) Employees who will accurately communicate the quarantine policy of (1) to prefectures and coordinate them so that the state and prefectures can work closely together.
 - (ii) Epidemiological experts who accurately determine the status of infections to review the quarantine policy of (1) promptly and appropriately (including the formulation of the Emergency Quarantine Guideline).
 - (iii) An emergency support team that is familiar with the quarantine measures such as slaughter and burial and supports specific quarantine measures of

prefectures.

- (iv) An Epidemiological Investigation Team to be established in the sub-committee.

- (3) After receiving a notice of the presence of an affected animal or suspected affected animal, to smoothly carry out specific quarantine measures in line with the quarantine policy of (1), the Prefectural Foot-and-mouth Disease Quarantine Headquarters (hereinafter referred to as the “Prefectural Quarantine Measures Headquarters”) comprising the relevant departments shall be held. Provided, however, that when it is particularly necessary to take smooth and accurate quarantine measures, it shall be held prior to the determination of disease.

- (4) To ensure the roles and functions of the Prefectural Quarantine Measures Headquarters can be smoothly and fully demonstrated, prefectures shall establish the division of roles such as quarantine measures, material procurement, epidemiological study, public relations and payment management.

- (5) Employees of (2)(i) dispatched by MAFF shall attend the Prefectural Quarantine Measures Headquarters to communicate the quarantine policy determined based on (1) and make the necessary adjustments.

- (6) The Prefectural Quarantine Measures Headquarters shall establish a communication system with municipalities, police, the Japan Self-Defense Forces (JSDF), veterinary medical associations, producers’ organizations, etc. to implement smooth and accurate quarantine measures.

- (7) The Ministry of Agriculture, Forestry and Fisheries shall promptly transfer or lease the quarantine materials and equipment possessed in response to an application from prefectures.

- (8) When establishing a measures headquarters other than the Ministry of Agriculture, Forestry and Fisheries Quarantine Measures Headquarters and the Prefectural Quarantine Measures Headquarters, the purpose and scope of jurisdiction shall be clarified and duplication of administrative work or the chain of command shall be noted to avoid confusion.

[Point to Be Considered [12]] Prefectural Quarantine Measures Headquarters

1. Establishment of Prefectural Quarantine Measures Headquarters

Prefectures shall establish a Prefectural Quarantine Measures Headquarters in consideration of the organizational structure of 2, facilitate quarantine measures and coordinate communication with the state and surrounding prefectures. In addition, if necessary, a local quarantine measures headquarters at the livestock hygiene service center near the infected site shall be established to facilitate quarantine measures at the affected farm, etc.

2. Organizational structure

With the prefectural governor overseeing the headquarters, with the cooperation of the relevant departments, an organization with the functions of the following Teams shall be established under the head to smooth promote quarantine measures:

- General Affairs Team: Formulation of specific quarantine policy based on the Quarantine Guidelines, budget formulation and execution, analysis of the status, coordination with MAFF and other relevant organizations (including communication coordination between the affected farm, local quarantine measures headquarters and the prefectural competent livestock department) and holding of the Government's Internal Liaison Committee are conducted.
- Information Team: Collection of the status of outbreak and quarantine measures, creating public relations materials, contacting public relations and responding to inquiries are conducted.
- Pathological Appraisal Team: On-site inspection for notification of abnormal domestic animals, collection of samples for disease appraisal, acceptance and sending of the samples and pathological appraisal are conducted.
- Quarantine Guidance Team: Inspection of the affected farm and advice to the General Affairs Team on the planning and guidance of quarantine measures shall be given.
- Quarantine Support Team: Procurement and distribution of materials and equipment for quarantine such as incineration, burial and disinfection, mobilization of quarantine personnel and coordination of related operations are conducted.
- Quarantine Response Team: Quarantine measures such as restrictions on

entry, slaughter and farm disinfection, as well as responses such as inspection of farms, etc. within the movement restriction area and area in which carrying-out is restricted (hereinafter referred to as “restriction area”) are taken.

- Evaluation Team: Evaluation, etc. of domestic animals and goods to assess what is allowed on the affected and surrounding farms are made.
- Record Team: Recording of information such as the position (site) in the animal quarters of the affected animal and the number of heads, confirmation and photography of the stage of lesion sites of the affected animal and photographing, etc. of images of the quarantine work are performed.
- Epidemiological Investigation Team: To prevent any disease spreading, collection of epidemiological information on the entry and exit of domestic animals, people, goods and vehicles in the affected farm and inspection to identify epidemiology-related domestic animals, etc. are conducted.
- Cause Investigation Team: Collection and organization of the necessary information to inspect the path of infection and field surveys in cooperation with the national Epidemiological Investigation Team are conducted.
- Miscellaneous Team: Affairs related to securing the required expenses and spending compensation, etc. are conducted.
- Healthcare Team: Under cooperation with the Public Health and Medical Bureau, etc. (In the case of a city with a public health center, departments overseeing the city shall also be included.), dealing with health check and other issues (including mental health) of quarantine measures workers and domestic animal owners are made.

3. Public announcement, etc. to journalistic organizations, etc.

- (1) When an affected animal or suspected affected animal is determined under Section 4, Item 2, MAFF and prefectures shall publicize the contents and future quarantine measures to journalistic organizations. Provided, however, that when it is particularly necessary to take smooth and accurate quarantine measures, the Animal Health Division shall, in consultation with the prefectural competent livestock department, make a public announcement before determining the disease.

(2) Publication by (1) shall be made at the same time by MAFF and prefectures.

(3) In the publication by (1), accurate information about the possibility, etc. of the infection spreading through people and vehicles, etc. shall be provided. In addition, when publishing information on the affected farm, the location shall be announced, but announcement of its name, etc. shall be withheld.

(4) The progress of the quarantine measures will also be discussed by the Animal Health Division and the prefectural competent livestock department and announced to the journalistic organizations as necessary.

(5) Cooperation on the following shall be requested from the journalistic organizations:

(i) To give full attention to protecting privacy;

(ii) To ensure work to prevent spreading and quarantine proceeds unhindered, such as staying away from the affected farm.

[Point to Be Considered [13]] Public announcement, etc. to journalistic organizations

When the presence of an affected animal or suspected affected animal is determined, a public announcement, etc. to journalistic organizations shall be made in Appended Form 5.

[Point to Be Considered [14]] Requests for cooperation from journalistic organizations

To request cooperation from journalistic organizations on the matters of Section 5, Item 3(5) of the Quarantine Guidelines by providing images of the state of the surrounding farm and internal quarantine measures as far as possible, centering on the Information Team and the record Team of the Prefectural Quarantine Measures Headquarters.

4. Securing the personnel necessary for quarantine measures

(1) Based on the measures taken in Section 3, Item 6, prefectures shall make plans for personnel necessary for epidemiological study, quarantine

measures such as slaughter, etc. at affected farms, implementation of movement restrictions, management of disinfection points, etc. and with the cooperation of relevant organizations and related organizations, shall secure the necessary personnel promptly. In addition, the plan shall be promptly reported to the Animal Health Division.

(2) When it is difficult for only prefectures to carry out quarantine measures at affected farms and survey the surrounding farms, etc., consultations shall be held with the Animal Health Division regarding requests to dispatch of staff from MAFF and the National Livestock Breeding Center and requests to dispatch prefectural animal health inspectors from other prefectures.

[Point to Be Considered [15]] Matters on securing personnel necessary for quarantine measures

1. To be able to promptly initiate quarantine measures after confirmation of areas in which foot-and-mouth disease has broken out, prefectures shall determine the whereabouts of necessary personnel in advance and order gathering as necessary.
2. To ensure quarantine workers, the presence or absence of domestic animal rearing for persons intending to engage in the work in advance shall be checked and if the persons rear cloven-hoofed animals, they should not directly engage in the quarantine work.
3. When a prefecture requests dispatch of prefectural animal health inspectors from other prefectures, it shall consult with the Animal Health Division on the necessary personnel, duration, work contents, etc. In addition, the Animal Health Division shall coordinate with each prefecture to create a specific dispatch schedule.
4. When consultations with MAFF have ensued regarding the dispatch of the Japan Self-Defense Forces (JSDF) personnel, prefectures shall, after fully coordinating with the local Disaster Response Office of the Japan Self-Defense Forces (JSDF) regarding the outbreak status, dispatch period, activity area, activities, etc., request disaster dispatch pursuant to the provisions of Article 83, paragraph (1) of the Self-Defense Forces Act (Act No. 165 of 1954).

Section 6. Quarantine measures at affected farms, etc.

1. Slaughter (Article 16 of the Act)

- (1) The prefectural animal health inspector shall issue slaughter instructions to the owner of the animals affected or suspected of being affected.
- (2) The entrance to the affected farm of the outbreak should be limited to one, in principle and other entrances should be closed by closing the gates or placing ropes.
- (3) The animals affected or suspected of being affected, in principle, shall be slaughtered within 24 hours in said farm after they are determined as animals affected or suspected of being affected under Section 4, Item 2.
- (4) Domestic animals with confirmed clinical signs should be slaughtered preferentially. In addition, when it is necessary to slaughter multiple domestic animals, pigs shall be slaughtered in preference.
- (5) When domestic animals are slaughtered outside the animal quarters, take the following measures:
 - (i) Covering the surrounding area with a blue tarp to avoid external visibility.
 - (ii) Installing a simple fence or retaining livestock sufficient to prevent them from escaping.
- (6) The slaughter shall be carried out promptly by methods such as lethal injection or electro-slaughter, taking the safety of quarantine workers into consideration. Pig slaughter shall be done efficiently, such as with electricity or carbon dioxide.

In addition, from the perspective of animal welfare as far as possible, such as using sedatives or anesthetics and giving due consideration to the emotions of the owners of domestic animals and workers engaged in quarantine measures.
- (7) Based on the fact that antiviral materials are only effective for pigs, in the event of an outbreak of foot-and-mouth disease on a large pig farm where it is difficult to carry out immediate slaughter quickly, the Animal Health Division and the prefectural competent livestock department shall consult and administer antiviral agents to pigs being reared on the farm.

In this case, MAFF shall secure sufficient antiviral agents that can be administered until the slaughter is completed.

In addition, long-term continuous use should be avoided to prevent resistant viruses emerging.

(8) Prefectures, in cooperation with the state, to facilitate prevention of outbreak and investigation of infection routes, shall record the sites and number of domestic animals developing disease at the time of slaughter and take clear photographs of the lesion areas (those with the longest elapsed time after onset) of the domestic animal and promptly send them to the Animal Health Division. Furthermore, in consultation with the Animal Health Division, prefectures shall collect test materials according to the rearing scale, including domestic animals that have not yet developed symptoms.

(9) Prefectures should actively request cooperation from private veterinarians and people concerned with domestic animals and promptly complete slaughter under the guidance of prefectural animal health inspectors.

[Point to Be Considered [16]] Matters on the implementation of quarantine measures at affected farms, etc.

1. Prefectures shall determine the sites of set up of tents, material storing site, etc., taking into account the layout of farm buildings, etc. and clarify the general director – the person those who is overseeing each operation and command system.
2. The prefectural animal health inspector shall explain to the owner of domestic animals an overview of foot-and-mouth disease, the contents of related acts, the owner's obligations and the quarantine policy and explain clearly that it is not possible to request a review under the Administrative Complaint Review Act (No. 68 of 2014) pursuant to the provision of Article 52-3 of the Act on Domestic Animal Infectious Diseases Control (Act No. 166 of 1951, hereinafter the "Act")
3. The general director in charge shall confirm with the prefectural headquarters in advance and receive instructions regarding the number of animals to be slaughtered, the method used, carcasses disposal method, disinfection area and other necessary matters.
4. Prefectures should set up adhesive sheets to capture or remove mice, flies, etc. before slaughtering.
5. The species and number of samples used to collect samples for investigating the infection route should be determined in consultation with

the Animal Health Division according to the rearing status and breakout status of each farm.

[Point to Be Considered [17]] Matters on workers engaged in quarantine measures

The following matters should be noted when workers engaged in quarantine measures implement the quarantine measures:

1. When entering the site, they should refrain from bringing in personal belongings while wearing quarantine clothing and boots.
2. When leaving the site, they should disinfect their body, clothes, shoes and glasses, then take off the quarantine clothing worn when entering, wash their hands and face and gargle. Furthermore, when taking home work clothing worn on site, after immersing them in disinfectant, they should be placed in a plastic bag and the exterior surfacing spray disinfected.
3. The prefectural headquarters shall give consideration to installing temporary tents at the entrances of the farms to facilitate changing of clothes and shoes. At that time, the flow lines of the workers should not be crossed before and after the work.
- 4 After returning agency (home), disinfect the vehicle used for movement, wash all the clothes worn and bathe and wash the body thoroughly
5. For 7 days from the day engaging in quarantine, do not touch any cloven-hoofed animal except at the affected farm. However, when it is confirmed that biosecurity measures have been properly implemented at the time of implementation of quarantine measures or when leaving the farm, the period may be shortened to 3 days.
6. The prefectural headquarters shall confirm the health status of workers engaged in quarantine measures before and after quarantine and establish cooperation with public health departments (including the department overseeing the city in the case of public health centers established) and strive to maintain the mental and physical health of workers

[Point to Be Considered [18]] Issuing slaughter instructions

Slaughter instructions that the prefectural animal health inspector issues to the owner of the animals affected or suspected of being affected shall be prepared in Appended Form 6.

[Point to Be Considered [19]] Matters on antiviral materials

The Animal Health Division and the prefectural competent livestock department shall consult on the use of such agents, since there is a difference by viral strain in the effect of reducing viral shedding in pigs by antiviral agents.

2. Disposal of carcasses (Article 21 of the Act)

(1) Carcasses of the animals affected or suspected of being affected, in principle, within 72 hours after being determined to be the animals affected or suspected of being affected according to Section 4, Item 2, shall be buried at the affected farm, etc. or its surroundings (not adjacent to residences, bodies of water, rivers and roads and daily life and limited to areas not accessible to humans and livestock in daily life).

(2) When it is not possible to secure the burial site on or around the farm and it is unavoidable to remove the carcasses from the farm for burial, the following measures should be taken in consultation with the Animal Health Division:

- (i) The relevant carcasses should be sufficiently disinfected.
- (ii) Sealed vehicles or containers shall be used, in principle. When these are not available, measures such as covering the floor and lateral sides with sheets to avoid any leakage of the transported object and further covering the upper side with sheets after loading the transported object(s) shall be taken.
- (iii) The overall surface of the vehicle shall be disinfected before and after loading.
- (iv) Passage of any roads in the vicinity of other farms shall be avoided and transportation routes not used by other livestock-related vehicles shall be established.
- (v) Transporter vehicles shall be sufficiently disinfected at the disinfection points during movement.
- (vi) The prefectural animal health inspector shall accompany persons to the place where the carcasses are disposed of.
- (vii) The vehicle and materials shall be immediately disinfected after transportation

(viii) The transportation process shall be recorded and kept.

(3) When disposal by burial is difficult, an incineration or rendering process shall be implemented in consultation with the Animal Health Division (the carcasses of the rendered affected animals shall be finally incinerated or buried). When moving the carcasses for the incineration or rendering process, measures in (2) should be taken and when moving the objects after the rendering process, measures shall be taken under (2) according to the status of the objects. Furthermore, in principle, burying after the rendering process should be carried out at the site (1).

(4) When the incineration or rendering process is implemented, the following measures shall be taken. In addition, when incineration is performed after rendering process, the following measures shall be taken according to the status of the objects:

(i) Taking measures such as spreading a sheet from the transporter vehicle to the place for inputting carcasses.

(ii) Taking measures such as separating the place housing the carcasses from the product yard.

(iii) After incineration of the carcasses is complete or input into rendering process, the route from the entrance of the incineration facility, etc. to the corpse handling intake shall be disinfected.

(iv) The prefectural animal health inspector, etc. shall be present until the incineration or rendering process is completed and the disinfection of facility and materials is terminated.

[Point to Be Considered [20]] Completion of slaughter within 24 hours and incineration and burial within 72 hours

For early containment, a certain standard within 24 hours and within 72 hours are established, since it is important to immediately slaughter the animals affected or suspected of being affected and dispose of their carcasses. As for this standard, in a farm under an environment that does not cause any problems, it is assumed that the rearing scale is 150 to 300 heads for rearing cattle farms and 1,000 to 2,000 heads for rearing pigs.

In light of the fact that time required varies depending on the conditions such as the scale of various farms, the structure of the animal quarter and weather conditions, while ensuring adequate spread prevention measures and the safety and health of the workers engaged in quarantine measures, strive to carry out

practical quarantine measures.

In addition, under these circumstances, it is important to strive to build a thorough system regularly by implementing quarantine exercises, etc. so that quarantine measures may be taken accurately and promptly.

3. Disposal of contaminated objects (Article 23 of the Act)

- (1) The following objects originating from the affected farm, etc., as contaminated objects, in principle, shall be buried at the affected farm, etc. or its surroundings (not adjacent to residences, bodies of water, rivers and roads and daily life and limited to places not accessible to humans and livestock in daily life). When disposal by incineration is difficult, upon consultation with the Animal Health Division, incineration, a rendering process or disinfection shall be performed. Contaminated objects should be isolated and stored so that wild cloven-hoofed animals (hereinafter referred to as “wild animals”) do not contact until they are disposed of by incineration, etc.
 - (i) Products such as raw milk, semen and fertilized eggs (However, semen and fertilized eggs which were collected and separately managed before the 21st day prior to the determination date of disease, etc. are excluded).
 - (ii) Manure
 - (iii) Litter
 - (iv) Feed
 - (v) Other objects are likely to be contaminated by viruses.

- (2) When it is unavoidable to move contaminated objects outside the farm, the following measures shall be taken in consultation with the Animal Health Division. Regarding the movement of objects after the rendering process, the following measures shall be taken according to the status of objects:
 - (i) Sealed vehicles or containers shall be used, in principle. When these are not available, measures such as covering the floor and lateral sides with sheets to avoid any leakage of the transported object and further covering the upper side with sheets after loading the transported object(s) shall be taken.
 - (ii) The overall surface of the vehicle shall be disinfected before and after loading.
 - (iii) In principle, passage on any roads in the vicinity of other farms shall be avoided and transportation routes not used by other livestock-related vehicles shall be established.

- (iv) During moving, carrying vehicles shall be disinfected sufficiently at the disinfection points.
 - (v) During moving, documents certifying that the relevant object is not subject to the prohibitions or restrictions prescribed in Article 32, paragraph 1 of the Act shall be carried and presented at the disinfection points, etc.
 - (vi) The vehicle and materials shall be immediately disinfected after transportation.
 - (vii) The transportation process shall be recorded and kept.
- (3) When incineration or the rendering process is implemented, the following measures shall be taken. In addition, when incineration is performed after the rendering process, the following measures shall be taken according to the status of the objects:
- (i) Taking measures such as spreading a sheet from the carrying vehicle to the place for inputting contaminated objects.
 - (ii) Taking measures such as installing the contaminated object space on the other side of the product space.
 - (iii) After completion of incineration or input for the chemical processing of contaminated objects, the route from the entrance of the incineration facility etc. to the place for inputting contaminated objects shall be disinfected immediately.

[Point to Be Considered [21]] Disposal of contaminated objects

At the following points, in consultation with the Animal Health Division, it is considered that the disposal of the contaminated objects in Section 8, Item 3(1) of the Quarantine Guidelines shall be completed.

In addition, movement of feed and excrement etc. at the farm shall be prohibited until the prefectural animal health inspector confirms that the processing necessary for inactivating foot-and-mouth disease virus contained in feed and manure etc. at the farm has been completed. Under the direction of the prefectural animal health inspectors, provided however that, this does not apply when moving them outside the farm in the process necessary for inactivation after thoroughly preventing of dissipation during transportation

1. At the time when placement of all contaminated objects at the farm into sealed containers is complete, when sealed containers shall be used in case contaminated objects are moved from the farm for incineration.
2. At the time when containment measures to start disinfection have been taken to prevent the spread of pathogens and when livestock manure, litter,

feed, etc. are disinfected.

3. At the time when slurry, urine, sewage and raw milk shall be confirmed for processing in accordance with “Quarantine Manual about Disposal of Domestic Animals Excrement Contaminated with Foot-and-Mouth Disease Virus” (No. 24 of Consumer Product Safety Act, No. 2402 dated August 10, 2012, notification of the Section Chief of the Animal Health Division, Food Safety and Consumer Affairs Bureau of MAFF) confirming the pH is lowered to 5 or less by adding citric acid, etc.

4. Disinfection of animal quarters, etc. (Article 25 of the Act)

At the end of the slaughter, the animal quarters where the animals affected or suspected of being affected were shall be disinfected at least three times every other week in accordance with the standard of Article 30 of the Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases Control (Ordinance of the Ministry of Agriculture, Forestry, No. 35 of 1951).

Disinfection shall be performed using strong alkaline or acidic sodium carbonate, slaked lime, etc., considering the fact that foot-and-mouth disease virus quickly loses its infectivity due to acid (pH of 6.0 or lower) or alkali (pH of 9.0 or higher).

[Point to Be Considered [22]] Quarantine measures at the outbreak of foot-and-mouth disease in slaughterhouses, etc.

When an abnormal domestic animal is determined to be the affected animal or suspected affected animal in slaughterhouses, livestock markets, quarantine measures shall be taken in accordance with Sections 6, Items 1 to 4 of the Quarantine Guidelines for Foot-and-mouth diseases in slaughterhouses, livestock market, etc.

Besides, consideration of outbreaks in slaughterhouses shall also extend to slaughter at slaughterhouse facilities (mooring facilities, sick animal slaughterhouses).

In addition, measures for disinfection in slaughterhouses in accordance with Section 6, Item 4 of the Quarantine Guidelines for foot-and-mouth diseases shall be taken measures based on explanations to the facility owner and facility structure.

Therefore, if necessary, requesting cooperation from the public health departments for coordination between the livestock health agency and the slaughterhouse and cooperating and facilitating work in the region.

The slaughterhouse shall be disinfected at least once after being cleaned so that feces and urine can be sufficiently removed. It should be noted that the slaughterhouse cannot resume operations for 21 days after the restriction area has been imposed.

5. Evaluation of domestic animals

- (1) When calculating the evaluation value of compensation, etc. prescribed in Article 58, paragraph 1 of the Act and special compensation (hereinafter, referred to as “compensation, etc.”) prescribed in Article 58, paragraph 2 of the Act, the evaluation value of domestic animals shall be assessed before they shall be determined as animals affected or suspected of being affected and said domestic animals that shall be the animals affected or suspected of being affected must not be taken into consideration.
- (2) In principle, the appraised value of compensation, etc. shall be calculated by adding production cost (calculated using statistical data) from the introduction day to the day that the animals affected or suspected of being affected are determined to introduction cost of said domestic animals. This figure shall be added to or subtracted from as necessary, taking into consideration the milk production, shape of the body, whether domestic animals have experienced birth, the remaining rearing period, etc.
- (3) Prefectures shall give guidance to owners of domestic animals to prepare photographs that show the shape of the body and skeleton and materials necessary to calculate the evaluation value for each slaughtered individual (in case of Team rearing, use a representative individual for each Team) to promptly calculate the evaluation value such as compensation, etc.
- (4) When MAFF finds it difficult to promptly calculate the evaluation value of domestic animals such as compensation, etc. in prefectures, upon consulting with the relevant ministries, immediately make a payment based on a rough estimation.

[Point to Be Considered [23]] Method to calculate the evaluation value of domestic animals

In principle, the method to calculate the evaluation value of domestic animals that have become the animals affected or suspected of being affected will

follow the appended form.

Section 7. Restriction or blocking of passage (Article 15 of the Act)

1. Prefectures or municipalities, upon consultation with the Animal Health Division, shall promptly restrict or block the passage around the affected farms with the cooperation of the police station with jurisdiction and relevant local governments after confirming an outbreak of foot-and-mouth disease. In this case, passage for commuting, medical care, welfare, etc. shall be accepted after sufficient disinfection.
2. When it is necessary to continue to restrict or block passage after the ceiling of 72 hours prescribed in the Act, consulting with the road administrator, etc. and to adjust in advance so that take appropriate action such as request self-restraint of passage, etc. shall be reinforced.
3. Efforts shall be made to explain the outline of and need for the method of procedures for restriction or blocking of passage, posting, etc. based on the standard of Article 5 of the Ordinance for Enforcement of the Act on Domestic Animal Infectious Diseases Control (Cabinet Order No. 235 of 1953) to the residents of relevant municipalities. When it is difficult to explain in advance, promptly explain it after implementation.

Section 8. Establishment of the movement restriction area and the area in which carrying-out is restricted (Article 32 of the Act)

1. Establishment of restriction areas

(1) Movement restriction area

(i) When a prefecture receives a notification stating that a domestic animal has been determined as an affected animal or suspected affected animal pursuant to Section 4, Item 2, it shall promptly establish, in principle, an area within a 10-kilometer radius of the affected farm as an area in which the movement of domestic animals, etc. (meaning those set forth in 4; the same applies in 5(iii) and 5(iv)) is prohibited (hereinafter referred to as the “movement restriction area”), upon consultation with the Animal Health Division. However, if it emerges that the relevant domestic animal is highly likely to be suffering from foot-and-mouth disease even before the determination referred to in Section 4, Item 2 has been made, the prefecture is to establish the movement restriction area without awaiting the results of such determination, upon consultation with the Animal Health Division.

(ii) When it is obvious that notification has been delayed from the infection status, etc. at the affected farm and it is likely that infection is already expanding according to the epidemiological information set forth in Section 3, Item 4(2), the prefecture shall establish an movement restriction area beyond the 10-kilometer radius according to the number of surrounding farms and rearing density of domestic animals, upon consultation with the Animal Health Division.

In this case, the movement restriction area may be established in such manner by covering the entire prefecture in which the affected farm is located or all the relevant prefectures, including the relevant prefecture.

(2) Carrying-out restriction area

A prefecture shall establish an area circumscribed to the movement restriction area within a 20-kilometer radius of the affected farm as an area from which the carrying out of domestic animals, etc. is prohibited (hereinafter referred to as the “area in which carrying-out is restricted”).

Also, in the case of (1)(ii), an area within 10 kilometers from the outer edge of the movement restriction area shall be established as the area in which carrying-out is restricted.

(3) Cases of outbreak at livestock markets or slaughterhouses

When a domestic animal located in a livestock market or slaughterhouse is determined as an affected animal or suspected affected animal, a prefecture shall take the following measures, upon consultation with the Animal Health Division:

- (i) In principle, an area within a 1-kilometer radius of the relevant livestock market or slaughterhouse shall have restricted movement imposed.
- (ii) In principle, the movement restriction area and the area in which carrying-out is restricted (hereinafter referred to as the “restriction areas”) shall be established in a manner similar to those prescribed in (1) and (2), centering around the farm which shipped the relevant domestic animal.

(4) Method to establish restriction areas

- (i) The border of the outer edge of the movement restriction area and that of the area in which carrying-out is restricted shall be established based on the administrative unit of the municipality, etc., roads, rivers, railroads or any other means appropriate for clearly indicating the border.
- (ii) When the movement restriction area or the area in which carrying-out is restricted extends across multiple prefectures, sufficient consultation shall be made in advance between the relevant prefectures under the instructions of the Animal Health Division.
- (iii) The following measures shall be taken in each case prior to establishing the restriction areas. When it is difficult to take these measures in advance, these measures are to be promptly taken after establishing such areas:
 - (a) Notifying the owners of domestic animals, municipalities and related organizations within the restriction area;
 - (b) Publicizing through public announcements, etc. to journalistic organizations; and
 - (c) Placing signs at the border between the main road and the movement restriction area and the area in which carrying-out is restricted.

(5) Notification to the owners of domestic animals

When a prefecture has established restriction areas, it must promptly notify the owners of domestic animals within the area of that fact and the location of the affected farm by telephone, fax or email, etc. and explain the subsequent inspection schedules. The prefecture must also issue instructions to the owners of domestic animals within the area to thoroughly

observe the physical conditions of the animals every day, while instructing them to also thoroughly practice rearing hygiene management e.g. by preventing the intrusion of wild animals.

[Point to Be Considered [24]] Guidance matters within the movement restriction area

A prefectural animal health inspector shall provide guidance to the following persons in the movement restriction area on the following matters, respectively. In addition, he/she shall enter the relevant facilities as necessary and monitor the status of the performance.

1. Owners of domestic animals

- (1) Persons other than the relevant parties should be voluntarily retained into the animal quarters, etc. and the entry or exit of relevant persons shall be minimized.
- (2) Entry of farm-related persons, etc. should be thoroughly disinfected.
- (3) A disinfectant highly effective for foot-and-mouth disease virus shall be used, specifically, by the following:
 - (i) The entrance and exit of the animal quarters, the outer edge of the animal quarters and the sanitary control area shall be disinfected using strongly alkaline or acidic sodium carbonate, slaked lime, citric acid, etc.;
 - (ii) Animal quarters shall be disinfected using sodium carbonate, slaked lime, citric acid, etc.;
- (4) Contact between domestic and wild animals shall be prevented by refraining from the use of paddocks (playgrounds), fencing off the farm and ensuring pastures of domestic animals, etc., are enclosed;
- (5) In areas where contact between wild animals and domestic animals is assumed, installing fences at the entrance and exit to prevent contact and feed, etc. should be isolated and stored so that wild animals do not come into contact.

2. Livestock-related personnel such as veterinarians, livestock artificial inseminators and hoof care specialists

- (1) A path with a low risk of infection shall be selected.
- (2) The instruments and chemicals to be carried shall be minimized.
- (3) When entering the farm, the body, equipment, vehicles, etc. shall be thoroughly disinfected.
- (4) Clothes, instruments, etc. that are easy to disinfect or dispose of shall be used.

(5) Entry of the vehicles into the sanitary control area of the farm shall be voluntarily restricted.

(6) Movement paths shall be recorded and stored.

3. Transportation companies for feed, raw milk, etc.

(1) Delivery routes with a low risk of infection shall be selected.

(2) Ongoing delivery or collection of milk from multiple farms shall not be conducted (excluding farms that negative was confirmed by the test to confirm the state of outbreak Section 11, Item 2(1) of the Quarantine Guidelines).

(3) Vehicles used for each delivery or milk collection shall be thoroughly disinfected.

(4) The raw milk tank exhaust port shall be covered by clothes wet with disinfectant.

(5) Delivery routes shall be recorded and stored.

4. Recovery operators of dead domestic animals

(1) Paths with a low risk of infection shall be selected.

(2) Vehicles shall be thoroughly disinfected.

(3) In principle, delivery shall be carried out at the farm entrance and exit.

(4) Delivery routes shall be recorded and stored.

5. Livestock-related facilities such as rendering plants and meat processing facilities

Incoming and exiting vehicles shall be thoroughly disinfected.

6 Wildlife Division

The carcasses of wild animals (including those by hunting) shall be properly processed by incineration, burial, etc. and the persons concerned with *JAPAN HUNTERS ASSOCIATION*(hunting associations), etc. shall be asked to cooperate by not leaving them at the site.

2. Change to the restriction area

(1) Expansion of the restriction area

When an outbreak outside the movement restriction area is likely to reach epidemic proportions in light of the state of outbreak, etc., the prefecture shall expand the restriction areas, upon consultation with the Animal Health Division.

(2) Reduction of the restriction areas

When it has become apparent that the expansion of infection is limited from the state of outbreak, confirmation of free status of surrounding farms and results of epidemiological study, the prefecture may reduce the scope of the movement restriction area to a 5-kilometer radius, upon consultation with the Animal Health Division. In doing so, the prefecture shall also establish an area within 10 kilometers from the outer edge of the movement restriction area as the area in which carrying-out is restricted.

3. Cancellation of the restriction areas

When the restriction area meets both the following requirements, the restriction shall be cancelled upon consultation with the Animal Health Division:

- (1) Negative results are confirmed in each free status confirmation test prescribed in Section 11, Item 2(2), which is conducted after 10 days have elapsed from the day on which all quarantine measures have been completed at every affected farm located in the movement restriction area (meaning that the slaughter based on Article 16 of the Act, the processing of carcasses based on Article 21 of the Act, processing of contaminated objects based on Article 23 of the Act and (first) disinfection of animal quarters, etc. based on Article 25 of the Act are completed in full; the same applies hereinafter); and
- (2) Since the day on which quarantine measures at every affected farm located within the movement restriction area were completed, 21 days have elapsed.

4. Subjects of restriction

The following are subject to restriction on movement or carrying out:

- (1) Live domestic animals;
- (2) Raw milk pumped at an affected farm or farm located in an area within a 1-kilometer radius of the affected farm (excluding farms for which negative results were confirmed from the outbreak state confirmation test prescribed in Section 11, Item 2(1));
- (3) Semen and a fertilized egg collected in the movement restriction area (excluding those collected before the 21st day prior to the determination date of disease, etc. and which were separately managed);
- (4) Carcasses of domestic animals;
- (5) Manure, etc.;

- (6) Litter, feed and livestock rearing equipment (excluding movements from farms).

5. Exceptions on restrictions

(1) Movement made for disposition of carcasses of domestic animals, etc. existing inside the restriction area

- (i) In light of the state of outbreak and environmental conservation, etc. the carcasses of domestic animals, litter, feed or manure, etc. of the farm in the restriction area for which a prefectural animal health inspector confirmed that there are no clinical abnormalities with respect to the reared animals, may be moved to incineration facility, etc. and other necessary places for the purpose of incinerating, burying, conducting rendering processing or disinfection, upon consultation with the Animal Health Division.
- (ii) The following measures shall be taken at the time of movement:
- (a) A prefectural animal health inspector shall confirm whether there are any abnormalities in the domestic animals in the relevant farm on the day of movement;
 - (b) Sealed vehicles or containers shall be used, in principle. When these are not available, measures, such as covering the floor and lateral sides with sheets to avoid any leakage of transported objects and further covering the upper side with sheets after loading the transported objects, shall be taken;
 - (c) The overall surface of the vehicle shall be disinfected before and after loading;
 - (d) In principle, passage on any roads in the vicinity of other farms shall be avoided and transportation routes not used by other livestock-related vehicles shall be established;
 - (e) Delivery to multiple farms in a row shall be avoided;
 - (f) The transporter vehicles shall be sufficiently disinfected at the disinfection points during movement;
 - (g) Documents certifying that the relevant object is not subject to the prohibition or restriction prescribed in Article 32, paragraph (1) of the Act shall be carried and presented at the disinfection points, etc. during movement;
 - (h) The vehicle and materials shall be immediately disinfected after transportation; and
 - (i) The transportation process shall be recorded and kept.

- (iii) The following measures shall be taken at the time of incineration, rendering processing or disinfection:
- (a) Measures such as spreading a sheet from the transporter vehicle to the raw material intake point;
 - (b) Measures such as establishing the raw material space on the other side of the product space; and
 - (c) The route from the entrance of the facility to the raw material intake point shall be disinfected immediately after completion of incineration, rendering processing, or input for the disinfection process.

(2) Movement for disposition of carcasses of domestic animals existing outside the restriction area

Prefectures may move carcasses of domestic animals of a farm located outside the restriction area to an incineration facility, etc. located within the movement restriction area for the purpose of conducting incineration or rendering processing, upon consultation with the Animal Health Division.

In this case, the measures described in (1)(iii)(a) to (c) shall be taken in addition to avoiding any drop-by at the farm located within the movement restriction area and sufficiently disinfecting the transporter vehicle at disinfection points, etc. before and after as well as during movement.

(3) Transit of domestic animals of farms located outside the restriction area

If domestic animals of a farm located outside the restriction area cannot be moved to such destinations as other farms or slaughterhouses located outside the restriction area unless they transit the restriction area, they may be allowed to transit the restriction area, upon consultation with the Animal Health Division.

In this case, the transporter vehicle shall be sufficiently disinfected at disinfection points, etc. before and after as well as during movement.

(4) Others

In addition to what is provided for in (1) to (3) above, in principle, no exceptions on restrictions shall be established during the 21-day period after the establishment of the restriction area, but, after such 21-day period, exceptions on restrictions on the entrance of domestic animals into the movement restriction area from outside the area may be established as follows, by taking into consideration the state of outbreak and other states,

such as the measures to prevent spreading of viruses in association with movement, upon consultation with the Animal Health Division.

In this case, the transporter vehicle shall be sufficiently disinfected at the disinfection points, etc. before and after as well as during movement.

Section 9. Restriction on events at domestic animal gathering facilities (Articles 33 and 34 of the Act)

1. Restriction within restriction area movement restriction area

In consultation with the Animal Health Division, prefectures shall suspend the implementation of the following projects and the holding of events within the movement restriction area.

- (1) Slaughterhouses (excluding meat processing plants)
- (2) Events for gathering domestic animals such as livestock markets and livestock associations, etc.
- (3) Pastures

[Point to Be Considered [25]] Work subject to restriction within the movement restriction area and the area in which carrying-out is restricted

1. Slaughterhouses

Services receiving new domestic animals (slaughter of living animals already having been accepted at the time of finding and process of the body on the way of slaughter, etc. can be carried out.)

2. Livestock markets, livestock associations, etc.

Services receiving new domestic animals (in principle, domestic animals that have already been accepted at the time of finding shall be fed in the venue.)

3. Pastures

Implementation of new pasture (domestic animals pasturing, if there is are animal quarters that can be accommodated in the pasture, pasturing shall be stopped.)

2. Restriction within the area in which carrying-out is restricted

Prefectures shall, in consultation with the Animal Health Division, stop holding the following events in the area in which carrying-out is restricted:

- (1) Events for gathering domestic animals such as livestock markets and livestock associations, etc.
- (2) Pastures

3. Exceptions on restrictions

In principle, no exceptions on restrictions shall be established during the 21-day period after the establishment of the restriction area, but, after such 21-day period, exceptions on restrictions on resume of the operations of

slaughterhouses located within the movement restriction area (excluding areas within a 5-kilometer radius of the affected farm) may be established as follows, by taking into consideration the state of outbreak and other states, such as the measures to prevent spreading of viruses in association with movement, upon consultation with the Animal Health Division. However, the domestic animals to be slaughtered shall be limited to those that are directly carried out from the farm to the slaughterhouse.

In this case, the transporter vehicle shall be sufficiently disinfected at the disinfection points, etc. before and after as well as during movement.

[Point to Be Considered [26]] Matters on events, etc. that do not involve gathering domestic animals

With regard to events, etc. that do not involve a collection of domestic animals, since it is possible to prevent the spread of foot-and-mouth disease by thoroughly disinfecting them, prefectures should inform and instruct them not to cancel events, etc. unnecessarily on the grounds in which foot-and-mouth disease has broken out. In addition, guidance should be given so that participants participating in events, etc. from areas where foot-and-mouth disease is occurring, are not treated unfairly, such as being restricted from participating in the event.

Section 10. Establishment of disinfection points (Article 28-2, etc. of the Act)

1. After receiving a notice of the determination of a disease-affected animal or suspected affected animal pursuant to Section 4, Item 2, with the cooperation of municipalities, police stations under jurisdiction, road managers, etc., the prefecture shall establish disinfection points aiming to prevent the spread of infection around the affected farm and outside the movement restriction area and outside the area in which carrying-out is restricted.

2. For the sites of the specific disinfection points, the area around the affected farm (within an approximately 1-kilometer radius of the farm), the border of the movement restriction area and the area in which carrying-out is restricted and other sites shall be selected, taking into account the following circumstances. In addition, in accordance with the expansion and reduction, etc. of the movement restriction area, the installation sites shall be reviewed each time.

- (i) Status of the road network
- (ii) Traffic volume of general vehicles
- (iii) Traffic volume of livestock-related vehicles
- (iv) Division of regions by mountains, rivers, etc.

3. In the installation of disinfection points, to ensure thorough prevention of the spread of viruses by vehicles, etc., a structure of disinfection equipment, shall be established etc. so that not only livestock-related vehicles and quarantine-related vehicles, but also general vehicles are disinfected efficiently and reliably as necessary.

For livestock- and quarantine-related vehicles, thorough disinfection should be instructed to pass through the disinfection point, including the driver and the inside of the vehicle.

[Point to Be Considered [27]] Matters on vehicle disinfection, etc.

1. Disinfection at disinfection points

(1) Installation sites of disinfection points

When considering the sites of disinfection points, it shall be consulted thoroughly with the police chief and the road manager and the surrounding living environment, the impact on agriculture, etc. shall be considered.

(2) Disinfection method at disinfection points

The method of disinfection at the disinfection point, based on the

characteristics of the installation site, by installation of disinfection tanks and disinfection mats on the road or by lead-in method to the parking lot, etc. (disinfection by a power sprayer). In addition, for the worker, the person who induces the vehicle to the disinfection point and the person who implements disinfection shall be properly placed.

(i) Livestock-related vehicles

Disinfection of vehicles shall be implemented with 4% sodium carbonate, 0.2% citric acid, etc. that is unlikely to corrode the vehicle body. Furthermore, after removing mud etc. adhering to the car body as far as possible, using a power sprayer, the entire vehicle area, centered on the area around its tires, shall be disinfected, including wiping the loading platform and the driver's seat. At that time, the lack of any blind spot of disinfection shall be confirmed by moving the movable portion. In addition, thorough disinfection of the driver's fingers and soles should be performed. Considering the effect on the human body, 0.2% citric acid, etc. shall be used to disinfect the driver's fingers.

(ii) General vehicles

At a minimum, disinfection shall be implemented using step-in disinfection tanks and disinfection mats for vehicles. In that case, the disinfectant shall be replaced regularly so that sufficient disinfection effect can always be obtained.

2. Disinfection in public facilities, etc.

Prefectures shall instruct on voluntarily installing disinfection equipment for facilities, etc., where large numbers of persons, such as public facilities, various events, hotels, golf courses, etc., gather, taking into account the circumstances in which foot-and-mouth disease has broken out and the degree of risk of outbreak.

3. Accurate information provision and guidance

Prefectures other than the infected prefecture shall provide accurate information and guidance to ensure the entry and exit of vehicles in the infected prefecture are unrestricted, even though appropriate vehicles have been disinfected.

Section 11. Confirmation of the state of invasion of viruses

1. Epidemiological study

(1) Method for implementing the epidemiological study

Prefectures shall implement epidemiological studies to identify domestic animals likely to have been contaminated by viruses based on epidemiological information collected pursuant to the measures described in Section 3, Item 4(2) and information collected thereafter (hereinafter such domestic animals are referred to as “epidemiology-related domestic animals”).

(2) Epidemiology-related animals

Domestic animals to which any of (i) to (iv) below are deemed to apply as a result of the study prescribed in (1), shall be determined as epidemiology-related domestic animals, upon consultation with the Animal Health Division and subject to observation of clinical signs (excluding the case where no abnormalities are already found as a result of entering the relevant farm pursuant to the measures prescribed in (1) or 2(1) inspection to confirm the state of outbreak). In addition, blood shall be collected to implement serum antibody tests after 14 days have elapsed from the day on which the domestic animals had contact with the affected animal or suspected affected animal and shall be sent to NIAH.

- (i) Domestic animals having had contact with an affected animal from 8 to 21 days prior to the determination date of disease, etc.;
- (ii) Domestic animals having had contact with a suspected affected animal within the past 8 to 21 days prior to the determination date of disease, etc. (limited to the domestic animals set forth in Section 4, Item 2(2)(ii));
- (iii) Domestic animals for which artificial insemination or transfer of a fertilized egg was conducted using semen or a fertilized egg collected from an affected animal or suspected affected animal (limited to the domestic animals set forth in Section 4-2(2)(ii)) within the past 8 to 21 days prior to the determination date of disease, etc.
- (iv) Domestic animals reared in a farm in which a suspected affected animal was reared as prescribed in Section 4, Item 2(2)(iv) to (vi).

In addition, when any person, object or vehicle that entered and left the hygiene management area of the affected farm within the past 21 days prior to the determination date of disease, etc. has entered the hygiene management area of another farm, etc. within seven days after entering the first-mentioned area, a prefectural animal health inspector shall determine the domestic animals reared in the relevant farm to be epidemiology-related

domestic animals, by taking into consideration the state of implementation of disinfection at the time of entry of such person, object or vehicle, upon consultation with the Animal Health Division.

(3) Movement restriction measures at farms rearing epidemiology-related domestic animals

For farms rearing epidemiology-related domestic animals, the movement of the following items shall be restricted pursuant to the provisions of Article 32 of the Act, until negative results are obtained in serum antibody tests which is implemented after 14 days have elapsed from the day on which the epidemiology-related domestic animals had contact with an affected animal or suspected affected animal, after domestic animals are determined to be epidemiology-related domestic animals pursuant to (2).

In addition, the entry of persons other than the relevant parties into the relevant farm shall be restricted:

- (i) Live domestic animals;
- (ii) Raw milk; (excluding raw milk from epidemiology-related domestic animals that was confirmed to be negative by genetic tests and serum antibody tests without abnormalities in clinical inspection)
- (iii) Semen and a fertilized egg collected; (excluding those collected on the day before the 21st day prior to the determination date of disease, etc. and classified and managed)
- (iv) Carcasses of domestic animals;
- (v) Manure, etc.; and
- (vi) Bedding materials, feedstuff, and livestock feeding equipment

[Point to Be Considered [28]] Matters on epidemiological inspection

1. Prefectures shall conduct wide-ranging inspections on entry or departure of domestic animals, people, goods and vehicles, action histories of farm employees, visiting from outside into the farm (including the action history of the visitor after visiting) and other matters that may spread foot-and-mouth disease virus.
2. Accordingly, prefectures shall instruct livestock-related companies and other persons concerned to organize information on people, vehicles and goods that enter and leave multiple farms, etc. on a daily basis so that information is provided promptly during the epidemiological study.
3. The prefectural competent livestock department shall, if the subject of the study is in another prefecture, after contacting the Animal Health Division,

contact the prefectural competent livestock department. The prefectural competent livestock department having received contact shall conduct an inspection as well as the infected prefecture.

4. On-site inspection and request to report on farms, etc. shall be carried out in accordance with the provisions of Article 51, paragraph (1) and Article 52, paragraph (1) of the Act.

[Point to Be Considered [29]] Number of materials collected in the inspection of epidemiology-related domestic animals

For epidemiology-related domestic animals of Section 11, Item 1(2) of the 11th of the quarantine guidelines, the head number of collected samples according to serum antibody tests performed after 14 days after contact with the affected animal or suspected affected animal, as the number likely to be 10% infected with 95% confidence, will be as follows:

Number of heads	Number of materials
1 to 15	Total heads
16 to 20	16
21 to 40	21
41 to 100	25
101 or more	30

* If there are multiple animal quarters, materials shall be collected from all animal quarters.

2. Inspection of surrounding farms located within the movement restriction area

(1) Inspection to confirm the state of outbreak

Prefectures are to implement the following survey and inspection when an outbreak of foot-and-mouth disease is found:

(i) Telephone survey

Prefectures must immediately confirm the existence or absence of an abnormal domestic animal pursuant to Section 4-2, with at least the owner of domestic animals within the movement restriction area by phone, etc., in cooperation with municipalities, after receiving notification stating that a domestic animal has been determined as an affected animal or suspected

affected animal. In addition, such confirmation is to be made as needed, until the movement restriction area is cancelled.

(ii) On-site inspection

(a) Prefectures must enter, at least, the farms (in the case of deer, sheep, goats, pigs and wild boars, limited to farms that rear 6 or more of them and farms which have been confirmed to have abnormal domestic animals as a result of the telephone survey described in (i)) that are located in an area within a 1-kilometer radius of the affected farm and every large-scale rearing farm (meaning farms rearing 200 or more cattle (limited to those that are 24-months old or older (in the case of fattening cattle (limited to dairy male cattle and hybridized type cattle; the same applies hereinafter in (ii)), those that are 17 months or older)) and water buffalo and farms rearing 3,000 or more cattle (limited to those that are older than four months but younger than 24 months (in the case of fattening cattle, those that are four months or older but younger than 17 months)), deer, sheep, goats, pigs and wild boars) that are located within the movement restriction area and carry out a clinical inspection, within 24 hours, in principle, after receiving any notification stating that a domestic animal had been determined as an affected animal or suspected affected animal pursuant to Section 4, Item 2, upon consultation with the Animal Health Division. In addition, they are to also collect samples (blood as well as the lung and neighboring lymph nodes of the dead livestock) for use in genetic tests and serum antibody tests and send the samples to NIAH.

(b) Prefectures shall, following the inspection of a, limit to farms in the movement restriction area (in the case of deer, sheep, goats and pigs and wild boars, farms that rear 6 or more of them and farms which have been confirmed to have abnormal domestic animals as a result of the telephone survey described in (i)), enter those that are not covered by the inspection and conduct a clinical inspection. As a result of clinical inspection, when it is determined that it is necessary to perform genetic tests and serum antibody tests, or when there is an instruction to send samples from the Animal Health Division, samples (nasal cavity swabs and blood) shall be collected and sent to NIAH. In principle, the inspection shall be carried out in a concentric order close to the affected farm.

(2) Free status confirmation test

To confirm free status in the restriction area, prefectures shall enter farms (in the case of deer, sheep, goats, pigs and wild boars, limited to farms that rear 6 or more of them) that are located within the relevant movement restriction area after 10 days have elapsed from the day on which quarantine measures have been completed with respect to all the affected farms that are located within the relevant movement restriction area and conduct clinical inspections. In addition, they shall collect samples (blood) to implement serum antibody tests and send them to NIAH.

3. Tests by NIAH

The NIAH conducts serum antibody tests when samples have been sent from a prefecture pursuant to 1(2) or 2(2) or genetic tests or serum antibody tests when samples have been sent from a prefecture pursuant to 2(1). In addition, the results of such tests shall be reported to the Animal Health Division.

4. Responses to be made when abnormalities or positive results are found by the tests referred to in 1(2) or 2

(1) The Ministry of Agriculture, Forestry and Fisheries shall carry out the determination referred to in Section 4 with respect to the results of the tests referred to in 1(2) or 2 or the tests referred to in 3 above that are to be carried out after the first-mentioned tests.

(2) The Ministry of Agriculture, Forestry and Fisheries shall promptly review the quarantine guidelines and formulate the Emergency Quarantine Guideline when it is necessary, based on the results of study referred to in 1, tests referred to in 2 and the tests referred to in 3 that are to be carried out after the first-mentioned tests as well as the results of the determination referred to in Section 4 which is to be conducted in (1).

5. Matters to be observed by inspectors

Persons who carry out the study or tests referred to in 1 and 2 are to observe the following matters:

- (i) Persons with respect to whom seven days have yet to elapse from the day on which they were involved in the quarantine measures at an affected farm are not to enter the farm at the time of conducting the study or tests referred to in 1 and 2. However, when it has been confirmed that biosecurity measures have been appropriately implemented at the time of

implementing quarantine measures at the affected farm or at the time of leaving the affected farm, the abovementioned period may be shortened to three days.

- (ii) Vehicles shall be parked outside the hygiene management area of the relevant farm and the above-mentioned persons shall enter the animal quarters wearing protective clothing.
- (iii) The abovementioned persons shall disinfect their clothing, shoes, glasses and other belongings in addition to their bodies as well as their vehicles at the time of leaving the relevant farm.
- (iv) The abovementioned persons shall bathe and sufficiently wash their bodies after returning home.
- (v) When any abnormalities or positive results have been found from the tests referred to in 1(2) or 2 with respect to the domestic animals at the farm into which the abovementioned persons entered, they shall refrain from entering other farms until it has been confirmed that the domestic animals of the relevant farm are not within the category of affected animals and suspected affected animals.

[Point to Be Considered [30]] Number of materials in the Inspection of outbreak status and the free status confirmation test

The number of materials used in the outbreak status confirmation test and the free status confirmation test, as the number that can be subject to 10% infection with 95% confidence, shall be as follows:

Number of heads	Number of materials
1 to 15	Total
16 to 20	16
21~40	21
41~100	25
101 or more	30

* If there are multiple animal quarters, materials shall be collected from all animal quarters.

Section 12. Preventive Slaughter (Article 17-2 of the Act)

1. Determination of the implementation of preventive slaughter

- (1) Preventive slaughter, since it is intended for healthy livestock that are not infected with foot-and-mouth disease, as an unavoidable measure in the absence of any other means, shall be carried out.

- (2) Therefore, MAFF, in consideration of the following factors and when it is considered difficult to prevent the spread of infection by only slaughter in the affected farm and movement restriction in the surrounding farms, shall determine the implementation of the preventive slaughter.
 - (i) Slowness of notification (status of lesions, heads of affected animals, etc.)
 - (ii) Spread of infection (number of farms rearing epidemiology-related domestic animals, the presence or absence of infection in pigs)
 - (iii) Environmental factors (geographical situation such as the number of surrounding farms, the density of rearing domestic animals, the presence or absence of mountains, rivers, etc.)
 - (iv) State of progress of quarantine measures including burial

- (3) When determining the implementation of preventive slaughter, in consideration of the effectiveness of vaccine stockpiles, the presence or absence of vaccination and administration of antiviral materials to the domestic animals subject to preventive slaughter shall be also determined.

2. Procedures for implementation of preventive slaughter, etc.

- (1) When MAFF decides to implement preventive slaughter, the Emergency Quarantine Guideline set forth in the following matters shall be immediately formulated and published:
 - (i) Implementation period
 - (ii) Implementation areas
 - (iii) Target domestic animals
 - (iv) Vaccination and administration of antiviral materials (in the case of implementation, the timing of implementation, scope of implementation, target domestic animals, etc.)
 - (v) Other necessary matters

- (2) Prefectures shall promptly carry out preventive slaughter based on the Emergency Quarantine Guideline. When vaccination is conducted in conjunction with preventive slaughter, MAFF shall transfer or lease sufficient vaccines and injection-related materials to the prefecture.

(3) In this case, MAFF shall ensure an amount of antiviral materials that can be administered until the preventive slaughter is completed. In addition, to prevent the emergence of resistant viruses, long-term continuous use should be avoided.

(4) Preventive slaughter shall be carried out in accordance with the slaughter as provided for in Section 6, Item 1. In addition, with reference to the method prescribed in Section 6, Item 5, evaluation of the domestic animal subject to preventive slaughter shall be conducted.

In this case, the evaluation of the domestic animal shall be the evaluation amount for the state when there was an order to the effect that the domestic animal should be killed and is not considered a domestic animal subject to preventive slaughter.

[Point to Be Considered [31]] Receipts for vaccines and reports on the use of vaccines

If a prefecture has transferred or leased vaccines, it shall issue a receipt in Appended Form 7. In addition, when using vaccines and injection-related materials, the effect of use shall be reported to the Chief of the Food Safety and Consumer Affairs Bureau of MAFF in Appended Form 8. If antiviral materials have been transferred or leased, a receipt and a usage report shall be issued in these forms.

Section 13. Vaccines

1. The current vaccine is effective to prevent the onset of foot-and-mouth disease is incapable of completely preventing infection, which means unplanned and disorganized use of the vaccine could disturb antibody tests conducted for confirming free status cleanliness and cause a tremendous long-term economic burden and confusion until free status is achieved, in addition to exacerbating the risk of overlooking any outbreak or epidemic of foot-and-mouth disease. Therefore, the use of vaccines must be carefully determined.
2. The Animal Health Division shall determine the effectiveness of the vaccine stockpiled against the virus, in case vaccination is required, promptly after the determination of an affected animal or suspected affected animal, based on analytical results of the serotype and DNA sequence information on the causative virus.
3. If the vaccine stockpile is considered effective, it shall be used as provided in Section 12.
4. The Ministry of Agriculture, Forestry and Fisheries shall further research and examine vaccines, considering the international situation, such as examples of use in other countries.

Point to Be Considered [32]] Matters on vaccines

1. The sites of vaccine stockpiles and injection-related materials shall, in principle, be an animal quarantine station, which MAFF shall transfer to a prefectural facility, etc. at onset.
2. Vaccination shall be carried out in accordance with the provisions of Article 31 of the Act and shall, in principle, be promptly and systematically implemented from the outside of the vaccination area toward the affected farm side prioritizing pigs.
3. When vaccinating, it shall be subject to the prescribed usage and dose. In the event of an injection accident, contact shall be made with the Animal Health Division and the instructions followed.
4. Unopened vaccines shall be returned in coordination with the Animal Health Division and an animal quarantine station. In addition, vaccines that have been unpacked or expired shall be handled appropriately such as disposal via incineration.

Section 14. Reintroduction of domestic animals

1. Inspection before introduction

Prefectures shall conduct on-site inspection of the farms for affected farms scheduled reintroduction, the farms conducting preventive slaughter and vaccinated farms within one month prior to the initial scheduled reintroduction date. At this time, the farm shall perform clinical observation of domestic animals daily after reintroduction and when the abnormality is confirmed, thorough guidance to immediately notify to a livestock hygiene service center.

2. Inspection after introduction

Two weeks after reintroducing domestic animals, prefectures shall conduct on-site inspections at the farm and clinical inspections of the introduced domestic animals.

In addition, after cancelling the movement restriction area, for at least three months, clinical inspections shall be conducted via on-site inspections to continue monitoring.

[Point to Be Considered [33]] Matters on the reintroduction of domestic animals

1. In principle, a prefectural animal health inspector shall conduct on-site inspections of farms that are scheduled to be reintroduced. Provided, however, that if this is difficult, private veterinarians, municipal officials, etc. that are considered appropriate by other prefectural officials or the prefecture may also do so.
2. The contents to be confirmed shall be as follows:
 - (1) Disinfection in the farm three times or more at intervals of one week after the end of slaughter (including disinfection on completion of the quarantine measures) has been carried out.
 - (2) Processing necessary to inactivate foot-and-mouth disease virus contained in feed, livestock excrement, etc. on the farm has been completed.
3. A prefectural animal health inspector, etc. determines that the first reintroduction to the farm shall be a small number for the heads of introduced domestic animals by animal quarters just in case, strives to introduce them step by step after then and instructs that disinfection be repeated prior to introduction if more than one week has elapsed since the previous disinfection.

4. In reintroducing domestic animals, prefectures shall strive to secure a system that can promptly take quarantine measures in preparation for any unexpected outbreak.

Section 15. Inspection of the cause of the outbreak

1. When it is determined that it is an affected animal or suspected affected animal according to Section 4, Item 2, MAFF and prefectures shall conduct a comprehensive survey on epidemiological information such as collecting epidemiological information on affected farms, domestic animals, people (persons who come into contact with domestic animals such as farm workers, veterinarians, livestock artificial inseminators and hoof care specialists, local government officials, etc.) and the entry or departure of vehicles (livestock carriers, milk trucks, feed carriers, carcass collection vehicles and compost carriers, etc.), feeding status (such as the presence or absence of the use of imported feed), overseas travel history of persons concerned, movement of goods, infection confirmation inspection in wild animals, weather conditions, etc. in cooperation with relevant organizations such as NIAH.

2. The epidemiological research team, comprising experts such as members of the sub-committee, shall provide the necessary advice and guidance so that inspections can be conducted quickly and accurately and analyze and compile causes based on the results of the inspection.

[Point to Be Considered [34]] Action items on epidemiological study

To verify the path of infection of this disease from all aspects, epidemiological information by conducting interviews, etc. from relevant parties shall be collected referring to the following:

1. Inspection subjects

- (1) Affected farms
- (2) Affected farms and epidemiology-related farms rearing cloven-hoofed and livestock-related facilities (livestock markets, slaughterhouses, feed and litter factories, feed and litter sales destinations, agricultural cooperatives, etc.)

2. Inspection matters

- (1) The surrounding environment of the farm (distance from the forest, field, residence and road, the presence or absence of surrounding farms, etc.)

- (2) Temperature, humidity, weather, air volume, wind direction
- (3) Movement of vehicles and transportation goods such as livestock carriers, milk trucks, feed carriers, carcass collection vehicles and compost carriers; equipment delivery vehicles, etc.
- (4) Movement of farm owners, farm workers, veterinarians, livestock artificial inseminators, hoof care specialists, livestock dealers, feed dealers, litter sellers, material sellers, drug dealers, livestock-related parties (agricultural cooperative staff, etc.), post office workers, couriers, families, acquaintances, etc. (including overseas travel history, the presence or absence of contact with wild animals, etc.)
- (5) The presence or absence of pasturing (if any, the period and place)
- (6) Distribution, invasion and contact opportunities of wild animals
- (7) Structure of animal quarters and ancillary facilities, prevention of invasion of wild animals
- (8) The presence or absence of shared machines for farm work
- (9) The presence or absence of use of livestock materials, etc. introduced from the infected countries, etc.

[Point to Be Considered [35]] Field survey conducted by the Epidemiological Investigation Team

In principle, for all outbreaks, after confirming any affected animal or suspected affected animal, as soon as possible, in the affected farm and its surroundings, a field survey that contributes to the epidemiological study shall be conducted.

In addition, members of the inspection team, as far as possible, shall include specialists in epidemiology and virology and it is composed of prefectural animal health inspectors of the prefecture where the affected farm is located and the staff of the Animal Health Division.

[Point to Be Considered [36]] Matters on infection confirmation inspections in wild animals

1. In consultation with the Animal Health Division, prefectures shall collect samples to implement genetic tests and serum antibody tests for dead animals, etc. and wild animals, etc. captured with the cooperation of *JAPAN HUNTERS ASSOCIATION* (hunting associations) in the

movement restriction area and take measures such as sending it to NIAH. Therefore, the prefectural livestock division in charge shall ask the wildlife division in charge to request the persons concerned of *JAPAN HUNTERS ASSOCIATION* (hunting associations) to cooperate in the collection of samples from these wild animals when dead wild animals are found or wild animals are captured within the area.

2. When a positive result is confirmed by the test of 1, the following measures shall be implemented promptly:

(1) Treatment of the carcasses of wild animals in accordance with The Quarantine Guidelines No. 6-2

(2) Disinfection of the point where wild animals were captured and restriction or blocking of traffic as necessary

(3) Awareness-raising among owners of domestic animals within a 10-kilometer radius of the site and confirmation of the presence or absence of an abnormal domestic animal

(4) Requirement to submit a report on the death status, etc. of domestic animals to owners of domestic animals fed in the surrounding area for at least 21 days after the completion of disinfection of (2)

(5) To the wildlife division in charge, at least 21 days after the completion of disinfection of (2), carcasses of wild animals found in the surrounding area (including those by hunting) shall be properly treated such as incineration, burial, etc. and the relevant parties of *JAPAN HUNTERS ASSOCIATION* (hunting associations), etc. shall be required to cooperate to refrain from leaving them at the site.

3. Measures of (2) shall be carried out in the same manner when positive is confirmed for wild animals before infection in domestic animals is confirmed.

Section 16. Others

1. No special treatment shall be made individually for domestic animals possessed by livestock-related parties, including genetically important domestic animals such as fertile bulls. Based on this, livestock-related parties shall regularly diversify risks by preserving genetic resources such as frozen semen and frozen fertilized eggs and by distribution arrangements for breeding stock.
2. The chief of the Food Safety and Consumer Affairs Bureau of MAFF shall establish a specific manual to implement quarantine measures and if necessary, specify other matters to be noted in the implementation of quarantine measures based on this Guidelines.
3. The Ministry of Agriculture, Forestry and Fisheries shall closely monitor the development trends of foot-and-mouth disease research and testing methods, strongly advance research and development helps improve such quarantine measures and promptly review this guideline if the results are achieved.
4. In view of the persistent mental stress of domestic animal owners and workers engaged in quarantine measures, prefectures shall strive to conduct detailed responses such as visiting farms and continuing the operation of consulting service.

Manual for Responses to Wild Animals on Countermeasures Against Foot-and-mouth Disease

If foot-and-mouth disease virus enters the Team of wild cloven-hoofed animals (hereinafter referred to as “wild animals”), it is necessary to prevent the expansion of infection from the wild animal Team and prevent the invasion of viruses from the wild animal Team to domestic animals. Accordingly, administrative agencies and related organizations shall coordinate and cooperate to promote measures against this disease in the wild animal Team by the following means:

1. Advance preparation

- (1) From the perspective of accurately implementing the responses of 2 and 3, prefectures shall strive to establish a coordinative and cooperative system with relevant organizations such as municipalities and *JAPAN HUNTERS ASSOCIATION* (hunting associations), through efforts such as inspecting the pathogen infection status of infectious diseases of domestic animals in wild animals.
- (2) To collect knowledge on wild animals accurately and quickly in the event of foot-and-mouth disease in wild animals, prefectures shall list experts in ecology and infectious diseases epidemiology of wild animals and strive to gather information.
- (3) Prefectures shall collaborate with relevant departments to gather information on the following contents and review and coordinate countermeasures:
 - (i) Measures to eliminate foot-and-mouth disease from wild animals (e.g. depopulating by capturing wild animals, bans on hunting, placement of attractants, installation of protective fences, maintenance of buffer zones, etc.);
 - (ii) Geographical range to implement measures;
 - (iii) Organizations and bodies implementing measures;
 - (iv) Budget required to implement measures;
 - (v) How to procure human resources;
 - (vi) Methods to procure materials necessary for quarantine responses;
 - (vii) Specific procedures for implementing measures described in (2) and (3) of 2.

2. Response to be made when an affected animal or suspected affected animal is confirmed

(1) Contact system

In the case where an affected animal or suspected affected animal of foot-and-mouth disease is confirmed in domestic animals, the Animal Health Division under the Food Safety and Consumer Affairs Bureau of MAFF (hereinafter referred to as the “Animal Health Division”) shall contact the Wildlife Division, Nature Conservation Bureau, Ministry of the Environment and shall contact the prefectural livestock division in charge which has covered an area within a 10-kilometer radius of the point estimated to be a source of foot-and-mouth disease by the farm (hereinafter referred to as the “affected farm”) where the affected animal or suspected affected animal has been confirmed and by epidemiological study. In addition, the prefectural livestock division in charge that has been contacted shall contact the relevant departments of the wildlife division in charge, etc. of the prefecture and related organizations such as *JAPAN HUNTERS ASSOCIATION* (hunting associations).

(2) Confirmation of infection of viruses in neighboring wild animal Teams

(i) In principle, at the affected farm and in an area within a 10-kilometer radius (hereinafter referred to as the “virus invasion state confirmation survey area”) centered on the point estimated to be a source of foot-and-mouth disease by epidemiological information, prefectures shall collect samples from wild animals in the following manner:

(a) Subjects of collection: Dead and captured wild animals

(b) Sample: Serum

(c) Collection implementation period: At least 21 days or more from the date of confirmation of the affected animal and suspected affected animal. The end of the collection shall be examined based on the status of foot-and-mouth disease infection in wild animals.

(d) Area subject to collect: In principle, within the virus invasion state confirmation survey area. Provided, however, that the target area shall be changed such as expanding as necessary or focusing on mountains and forests in the area, considering the knowledge of experts described in 1(2).

(ii) In the area, if a dead wild animal is found or a wild animal is captured, prefectures shall ask *JAPAN HUNTERS ASSOCIATION* (hunting associations) to cooperate to contact the counter overseeing the

prefecture and cooperate by collecting samples from these wild animals and to transport them, etc.

(iii) Prefectures shall send or carry in samples to the Exotic Diseases Research Facility of the National Institute of Animal Health, National Agriculture and Food Research Organization (NARO) (hereinafter referred to as the "NIAH").

(iv) In principle, NIAH shall conduct serum antibody tests for the samples.

(3) Virus spread prevention measures in the surrounding wild animal Teams
Prefectures shall ask the persons concerned with *JAPAN HUNTERS ASSOCIATION* (hunting associations), etc. to cooperate with the following:

(i) Carcasses of wild animals and captured wild animals found in the virus invasion state confirmation survey area shall not be left at the site and shall be treated appropriately by incineration or burial, etc.

(ii) The site of discovery of carcasses, the point at which wild animals are captured, the equipment used such as a trap and the vehicles for transportation, etc. shall be disinfected.

(iii) Measures to reduce the possibility of foot-and-mouth disease virus being transmitted through humans, such as disinfection of quarantine clothing and boots worn by persons engaged in work within the virus invasion state confirmation survey area, shall be taken.

3. Responses to be made when foot-and-mouth disease virus is detected from a wild animal or when an antibody against foot-and-mouth disease virus is detected

(1) Contact system

According to 2(1).

(2) Disinfection of confirmation sites, etc.

Prefectures shall, if necessary, re-disinfect the point where the wild animal has been captured. In addition, when there is a risk of the viruses being spread by vehicles, etc. passing, such as when the point is located on a public road, traffic shall be restricted or blocked as necessary.

(3) Confirmation of infection of viruses in the surrounding wild animal Teams

In principle, prefectures shall note that the target area is within a 10-kilometer radius centered on the point where the wild animal was captured and shall conduct an invasion status survey of foot-and-mouth disease based on 2(2). In addition, the target period shall be at least 21 days after the

completion of disinfection of (2) and the collection target area shall be, in principle, within the virus invasion state confirmation survey area. Provided, however, that changes shall be made to the collection target area such as expanding as necessary or focusing on mountains and forests in the area, based on the knowledge, etc. of experts described in 1(2).

(4) Virus spread prevention measures in the surrounding wild animal Teams

It shall be carried out based on 2(3). It shall be noted that the target area is an area within a 10-kilometer radius centered on the point where the wild animal was captured, the target period is at least 21 days after the end of disinfection of (2).

(5) Measures to detect outbreaks in domestic animals from an early stage

- (i) Prefectures shall conduct on-site inspections on farms rearing domestic animals in the virus invasion state confirmation survey area set by (3), check the presence or absence of any abnormalities such as blisters, etc. collect samples for conducting pathological appraisal if necessary and send them to NIAH. In addition, in the case of pasturing, guidance such as discontinuation of pasturing shall be provided.
- (ii) Prefectures shall periodically request that farms rearing domestic animals in the virus invasion state confirmation survey area set by (3) report the death status of domestic animals for at least 21 days after the end of disinfection of (2).

Method to Calculate the Evaluation Value of Domestic Animals

1. Fattening cattle (Wagyu (Japanese beef cattle), crossbred and dairy cattle)

(1) Basic method of calculating appraised value

Price of introducing original livestock + fattening cost (production cost per day × rearing days)

(2) Method of calculating introductory price of original livestock and fattening cost

(i) The introductory price is the cost required to introduce original livestock and is confirmed by a purchase slip, etc.

(ii) When the introductory price cannot be confirmed or when the original livestock is born at the farm, it shall be based on the average trading price (during the most recent one-year period) of a cow equivalent to the original livestock (a calf of similar race (Japanese black, etc.), usage (suitable for fattening, etc.)) at a domestic animal market normally used by the domestic animal owner and as required, the price shall be calculated by considering bloodline, etc.

In addition, the specific amounts to be added by considering bloodline, etc. shall be calculated by a prefecture based on registration scores evaluated by a registration group in case of mother cow's qualities and breeding values calculated by a prefecture in case of sire's qualities and depending on breeds, the handling shall be as follows:

a. Wagyu (Japanese beef cattle): Qualities of the mother cow and sire.

b. Crossbred cattle: Only qualities of a sire are considered.

c. Dairy cattle: Qualities are not considered.

(iii) To calculate the production cost per day, subtract the total production cost by the original livestock price and divide it by the average fattening period.

(iv) The rearing days marks the number of days from the introduction of the original livestock to the date of determining affected animals or animals suspected of being affected.

[Reference] Production cost per day (2009 Livestock Product Production Cost Survey)

- Production cost of fattening young oxen per day (national average)

(Total production cost 965,996 yen - original livestock price 523,902 yen)/

(fattening period 20.2 months × 30.4 days) = 720 yen

- Production cost of crossbred fattening cattle per day (national average)

(Total production cost 583,148 yen - original livestock price 195,223 yen)/

(fattening period 19.2 months × 30.4 days) = 665 yen

- Production cost of fattening dairy bulls per day (national average)

(Total production cost 338,437 yen - original livestock price 104,769 yen)/

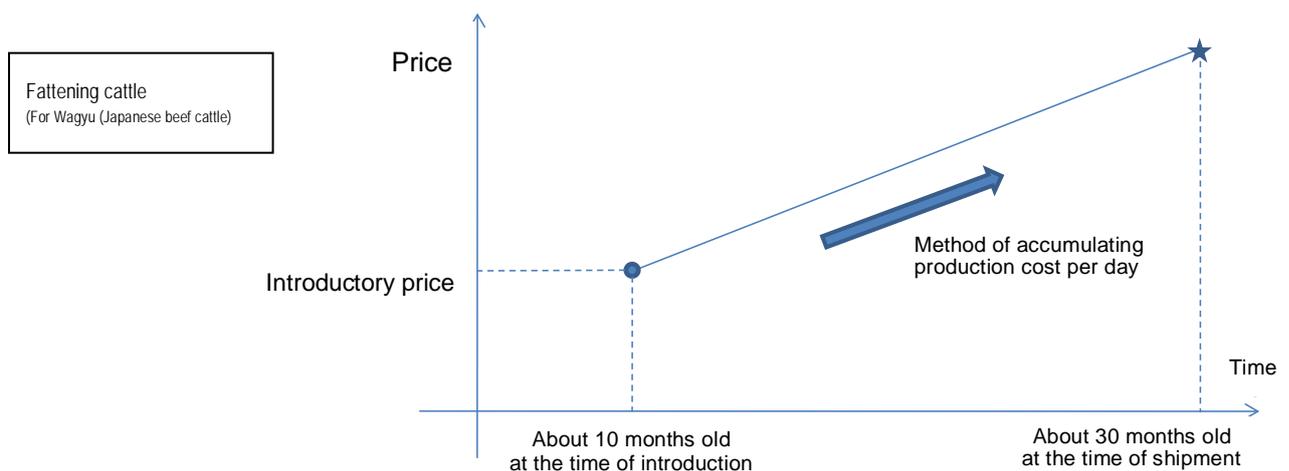
(fattening period 14.6 months × 30.4 days) = 527 yen

[E.g.] Evaluation at the shipment of fattening cattle (wagyu (Japanese beef cattle)) (30 months old)

Introduction price: production cost per day × rearing days

393,773 yen (Average trading price of Wagyu calf across Japan) + 720 yen × (about 20 months × 30.4 days)

= 831,533 yen



2. Fattening pigs

(1) Basic method of calculating appraised value

Price of introducing original livestock + fattening cost (production cost per day × rearing days)

(2) Method of calculating introductory price of original livestock and fattening cost

(i) The introductory price is the cost required to introduce original livestock and is confirmed by a purchase slip, etc.

(ii) When an original livestock is born at the farm or the introductory price cannot be confirmed, a delivered price shall be used and the introductory price shall be calculated by multiplying the production cost of the fattening pig in the livestock product production cost in the latest year by 9/100.

(iii) As for the production cost per day, subtract the total production cost by the childbirth price and divide it by the fattening period (Average sales months of age) and multiply the cost by 50/100 to calculate the production cost per day in the previous period (from birth date to 70 days old) and calculate the production cost per day in the later period (71 days old to shipment) by multiplying by 130/100.

(iv) The rearing days marks the number of days from the introduction of original livestock in case of the introduction of livestock and from the birthdate in case of the original breeding/fattening consistent management, to the day on which affected animals or animals suspected of being affected are determined.

[Reference] Production cost per day (2011 Livestock Product Production Cost Survey)

- Delivered price (national average)

Total production cost 31,903 yen × the percentage of cost required for producing a piglet to the total pork production cost: 9% = 2,871 yen

- Production cost of a fattening pig per day (national)

(whole production cost 31,903 yen - childbirth price 2,871 yen)/
fattening period 6.4 months × 30.4 days) = 149 yen

- early production cost per day (0-2.3 months old): 50% of production cost per day = 75 yen

- late production cost per day (2.3-6.4 months old): 130% of production cost per day = 194 yen

[E.g.] Evaluation at the shipment of a fattening pigs (6.4 months old)

[If introducing 100-day-old piglets]

Introductory price: production cost per day × rearing days

15,220 yen + (194 yen × (6.4 - 3.3 months) × 30.4 days) = 33,503 yen

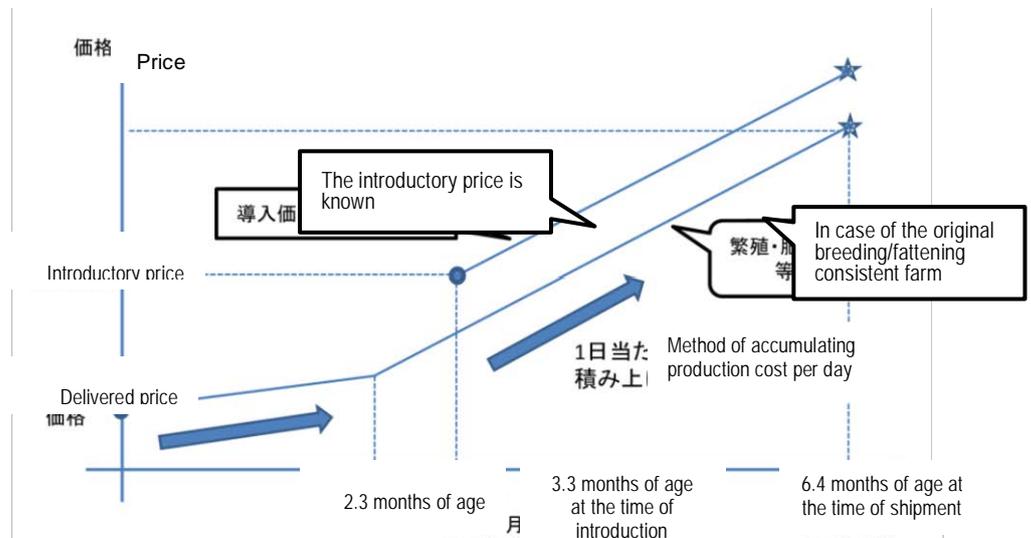
* In this calculation example, the introduction price is set using agricultural price statistics.

[In case where there is no introduction price due to breeding/fattening consistent management, etc.]

Delivered price: production cost per day × rearing days

$$2,871 \text{ yen} + ((75 \text{ yen} \times 2.3 \text{ months}) + (194 \text{ yen} \times 4.1 \text{ months})) \times 30.4 \text{ days} = \boxed{32,295 \text{ yen}}$$

Fattening pigs



3. Beef calf

[Wagyu calf]

(1) Basic method of calculating appraised value

Delivered price + increase in value according to rearing days (increase in value per day × rearing days)

+ additional amount for parent cattle

(2) Method of calculating delivered price and increase

(i) The delivered price shall be calculated by multiplying the average selling price of dairy calf (crossbred cattle: calf less than 3 months old) on agricultural price statistics during the most recent one-year period by the percentage calculated by dividing the guaranteed standard price for Japanese black in the beef cattle subsidy system by the guaranteed standard price for the crossbred cattle because there is no direct index price in the production cost survey, etc.

(ii) The increase per day shall be calculated via the following formula:

(market average price in a neighboring market or the guaranteed standard price for Japanese

black - delivered price) / average shipment day age in the neighboring market

(iii) The rearing days is the number of days from the birthdate of original livestock to the day of determining an animal suspected of being affected.

(iv) In addition, as required, the bloodline shall be considered and specific amounts to be added by considering the bloodline, etc. shall be calculated by a prefecture based on registration scores evaluated by a registration group in case of mother cow's qualities and breeding values calculated by a prefecture in case of sire's qualities.

[Reference]

- Delivered price (calculated based on the 2009 agricultural price statistics)

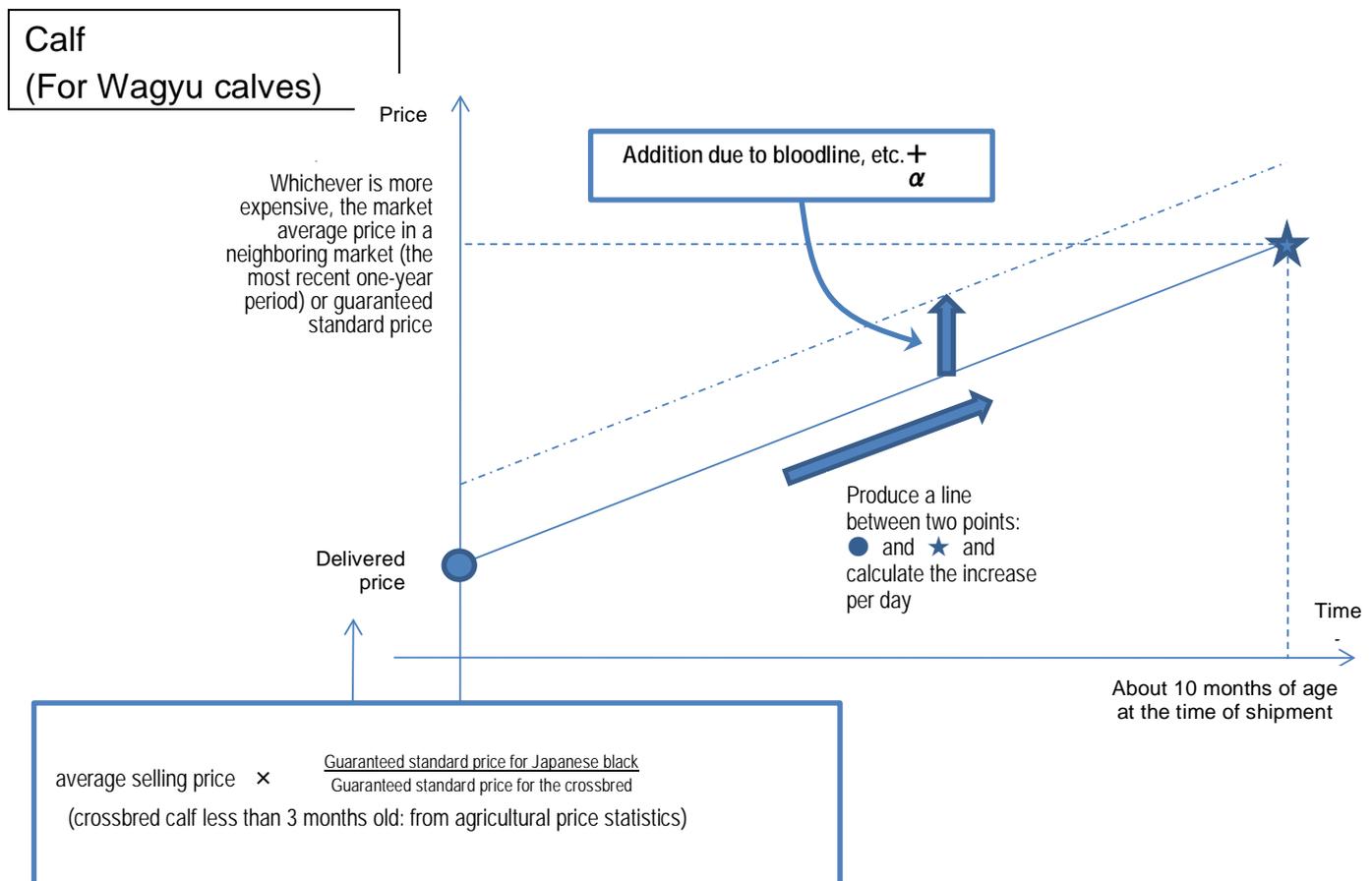
$$\text{Baby calf (crossbred cattle: calf less than 3 months old) } 95,730 \text{ yen} \times \frac{\text{guaranteed standard price for Japanese black: 310,000 yen}}{\text{guaranteed standard price for the crossbred cattle 181,000 yen}} =$$

163,957 yen → Average selling price in 2009

- Increase of Wagyu calf per day (calculated based on the 2009 agricultural price statistics)

$$(\text{Average selling price of Wagyu calf } 387,400 \text{ yen} - \text{delivered price } 163,957 \text{ yen}) /$$

$$(\text{rearing period } 10 \text{ months} \times 30.4 \text{ days}) = 735 \text{ yen}$$



[Dairy calf (crossbred bull)]

(1) Basic method of calculating appraised value

Delivered price + increase in value according to rearing days (increase in value per day × rearing days)

+ Additional amount for parent cattle

(2) Method of calculating delivered price and increase in value according to rearing days

- (i) The delivered prices shall be the average selling prices of dairy calf (Holstein bull: around 7-10 days after birth) and dairy calf (crossbred cattle: around 7-10 days after birth) on agricultural price statistics for the most recent one-year period.
- (ii) The increase per day shall be calculated based on the delivered price and the average trading price in a neighboring market at the time of shipment.
- (iii) The rearing days is the number of days from the birthdate of an original livestock to the day of determining affected animals or animal suspected of being affected.
- (iv) In addition, for crossbred cattle, as required, the bloodline of the sire is considered and a prefecture shall calculate the specific amounts to be added based on the breeding values calculated by the prefecture in case of sire's qualities.

[Reference]

- Delivered price (calculated based on the 2009 agricultural price statistics)

Dairy calf (Holstein fertile bull: about 8.5 days old) average selling price = 26,310 yen

- Increase of dairy calf (bull) per day (calculated based on the 2009 agricultural price statistics)

(Average selling price of fattening dairy bull (Holstein: about 6.5 months of age) 101,300 yen

- delivered price 26,310 yen) / (rearing period 6.5 months × 30.4 days) = 380 yen

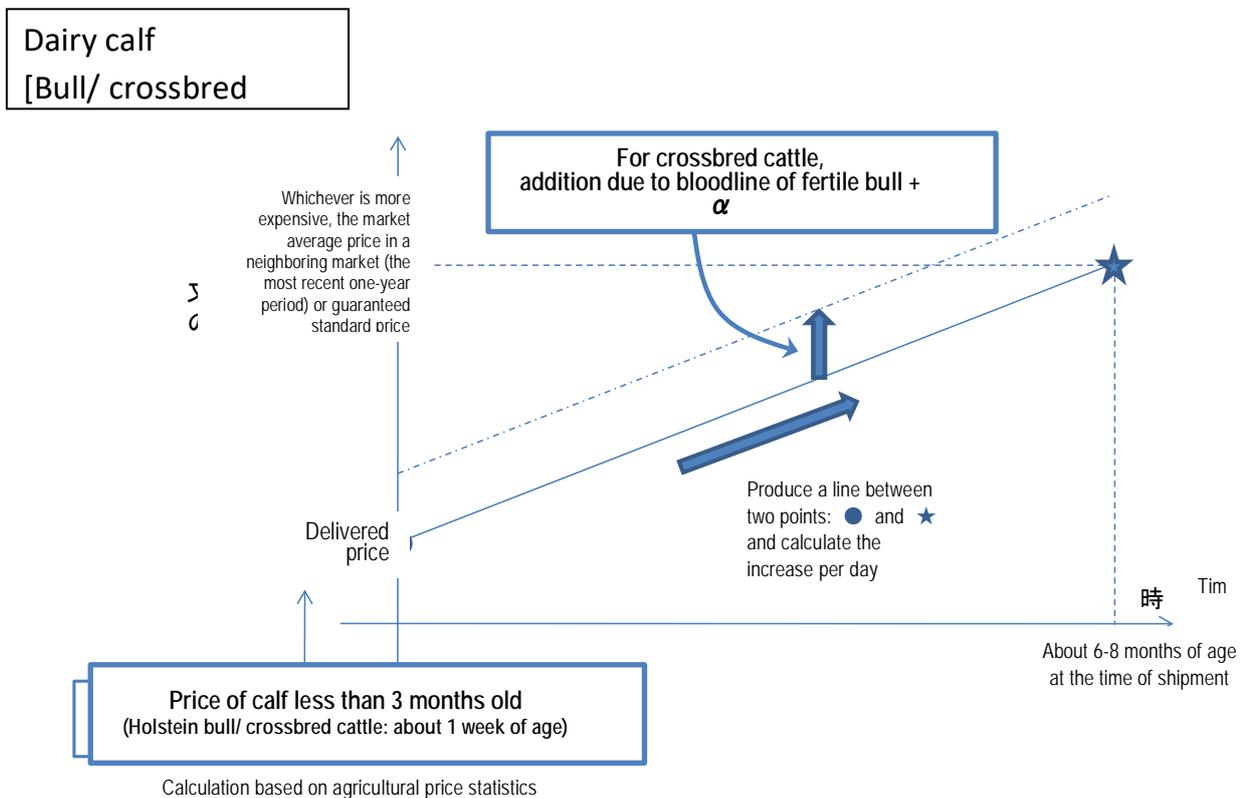
- Delivered price (calculated based on the 2009 agricultural price statistics)

Dairy calf (crossbred cattle: about 8.5 days old) average selling price = 73,440 yen

- Increase of dairy calf (crossbred cattle) per day (calculated based on the 2009 agricultural price statistics)

(Average selling price of fattening dairy cattle (crossbred cattle: about 8 months of age) 161,300 yen

- delivered price 73,440 yen) / (Rearing period 8 months × 30.4 days) = 361 yen



4. Beef breeding cows/ breeding sows

[Beef breeding cows (nulliparous)]

(1) Basic method of calculating appraised value

Price of introducing original livestock + rearing cost (production cost per day × rearing days)
+ price for conception

(2) Price of introducing original livestock and rearing cost

(i) The introduction price is the cost required to introduce original livestock and is confirmed by a purchase slip, etc.

(ii) When the introductory price cannot be confirmed or when the original livestock is born at the farm, it shall be based on the average trading price (during the most recent one-year period) of a cow equivalent to the original livestock (a calf of similar race (Japanese black, etc.), usage (suitable for breeding, etc.)) at a domestic animal market normally used by the domestic animal owner and as required, the price shall be calculated by considering bloodline, etc. In addition,

the specific amounts to be added by considering bloodline, etc. shall be calculated by a prefecture based on registration scores evaluated by a registration group in case of mother cow's qualities and breeding values calculated by a prefecture in case of sire's qualities.

- (iii) The production cost per day shall be that of a fattening pig in the production cost survey.
- (iv) The rearing days is the number of days from the introduction of original livestock to the day of determining affected animals or animals suspected of being affected.
- (v) In case of conception, around 20% of the value of the mother cow should be added (limited to cases where a veterinarian can confirm the conception in a pregnancy test).

[Dairy breeding cows (para)]

(1) Basic method of calculating appraised value

Standard price at the first childbirth \times estimated index/100 + price for conception

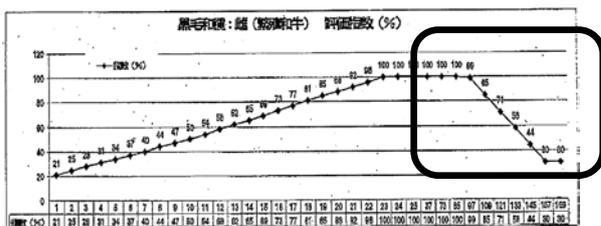
(2) Standard price at the first childbirth and the method of calculating estimated index

(i) The Standard price at the first childbirth shall be calculated via the following formula:

Price of introducing original livestock + average rearing cost to the first childbirth months of age

(production cost per day \times rearing days)

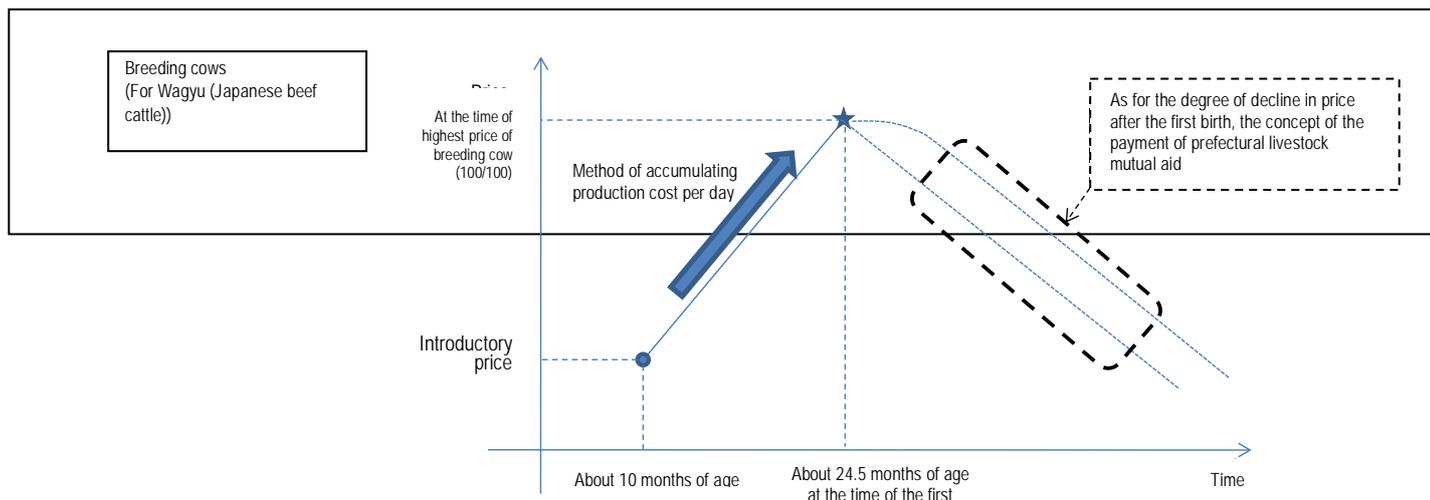
(ii) The estimated index is the index of the decrease in value due to deterioration over time assuming a value at childbirth of 100 and the prefectural livestock mutual aid payment system shall be used and calculated.



[Reference] Estimated index used by Miyazaki Pref. at the Time of Outbreak of Foot-and-Mouth Disease (Wagyu breeding cow)

- (iii) If nulliparous breeding cows are introduced, the standard price at the first childbirth shall be the addition of the introductory price to the production cost until the first childbirth (the production cost per day \times the number of days until the childbirth).
- (iv) The production cost per day shall be that of fattening young oxen in the production cost survey.

(v) In case of conception, around 20% of the value of the mother pig should be added (limited to



cases where a veterinarian can confirm the conception in a pregnancy test).

[e.g.] Evaluation of beef breeding cows at the time of first childbirth (24.5 months of age)

introduction price: production cost per day × rearing days × Addition for conception

{382,600 yen (the average purchase price of breeding Wagyu female calf) + 720 yen × (24.5 - 9.5 months) × 30.4 days} × 1.2= 853,104 yen

[Breeding sows (nulliparous)]

(1) Basic method of calculating appraised value

Price of introducing original livestock + rearing cost (production cost per day × rearing days) + price for conception

(2) Price of introducing original livestock and rearing cost

(i) The introduction price is the cost required to introduce original livestock and is confirmed by a purchase slip, etc.

(ii) When the introduction price cannot be confirmed or when the original livestock is born at the farm, it shall be the average trading price (in the most recent one year period) of a pig equivalent to the original livestock (pig of similar race, usage (suitable for breeding, etc.) at a domestic animal market normally used by the owner of the domestic animals.

(iii) The production cost per day shall be that of a fattening pig in the production cost survey.

(iv) The rearing days is the number of days from the introduction of original livestock to the day of determining affected animals or animals suspected of being affected.

(v) In case of conception, around 20% of the value of the mother pig should be added (limited to cases where a veterinarian can confirm the conception in a pregnancy test).

[Breeding sows (para)]

(1) Basic method of calculating appraised value

Standard price at the first childbirth \times estimated index/100 + price for conception

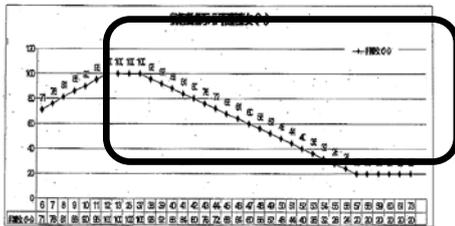
(2) Standard price at the first childbirth and the method of calculating estimated index

(i) The Standard price at the first childbirth shall be calculated via the following formula:

Price of introducing original livestock + average rearing cost to the first childbirth months of age
(production cost per day \times rearing days)

Besides, the price of introducing original livestock and rearing cost shall be calculated using the same method as for a breeding sow (nulliparous).

(ii) The estimated index is the index of decrease in value due to deterioration over time, assuming a value of 100 at the first childbirth and applying the prefectural livestock mutual aid payment system for calculation.



[Reference] Estimated index used by Miyazaki Pref. at the Time of Outbreak of Foot-and-Mouth Disease (breeding sows)

(iii) The production cost per day shall be that of a fattening pig in the production cost survey.

(iv) In case of conception, around 20% of the value of the mother pig should be added

(limited to cases where a veterinarian can confirm the conception in a pregnancy test).

[e.g.] Evaluation of breeding sows at the time of first childbirth (12 months old)

introductory price (production cost per day \times rearing days) \times Addition for conception

$$\{55,280 \text{ yen (the average purchase price of breeding sow (hybrid))} + 194 \text{ yen} \times (12 - 3.3 \text{ months}) \times 30.4 \text{ days}\} \times 1.2$$
$$= \boxed{127,779 \text{ yen}}$$

5. Dairy Cow

[Dairy breeding cow (lactating cows: para)]

(1) Basic method of calculating appraised value

Price of introducing original livestock + rearing cost (production cost per day \times rearing days) + price for conception

(2) Price of introducing original livestock and rearing cost

- (i) The introductory price is the cost required to introduce original livestock and is confirmed by a purchase slip, etc.
- (ii) When the introductory price cannot be confirmed or when the original livestock is born at the farm, it shall be the average trading price (during the most recent one-year period) of a cattle equivalent to the original livestock (calf with the same race (dairy cattle, etc.), usage (suitable for lactating and breeding, etc.)) at a domestic animal market normally used by the domestic animal owner.
- (iii) The production cost per day shall be that of fattening dairy bulls in the production cost survey.
- (iv) The rearing days is the number of days from the introduction of original livestock to the day of determining affected animals or animals suspected of being affected.
- (v) In case of conception, around 20% of the value of the mother cow should be added (limited to cases where a veterinarian can confirm the conception in a pregnancy test).

[Dairy breeding cow (lactating cows: para)]

(1) Basic method of calculating appraised value

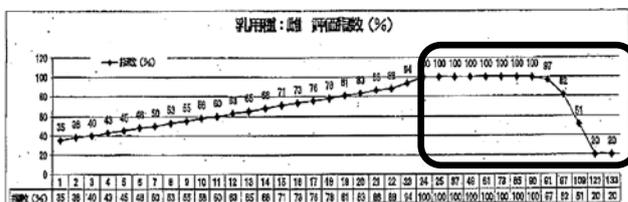
Standard price at the first childbirth \times estimated index/100 + price for conception + price for the ability to produce milk

(2) Standard price at the first childbirth and the method of calculating estimated index

(i) The standard price at the first childbirth shall be calculated via the following formula:

Introductory price of original livestock + average rearing cost to the first childbirth months of age (production cost per day \times rearing days)

(ii) The estimated index is the index of decrease in value due to deterioration over time, assuming a



[Reference] Estimated index used by Miyazaki Pref. at the Time of Outbreak of Foot-and-Mouth Disease (Dairy Cattle): Every prefecture has its own similar index.

value of 100 at the first childbirth and applying the prefectural livestock mutual aid payment system for calculation.

(iii) If nulliparous breeding cows are introduced, the standard price at the first childbirth shall be the addition of the introductory price to the production cost until the first childbirth (the production cost per day \times the number of days until the childbirth).

- (iv) The production cost per day shall be that of fattening dairy bulls in the production cost survey.
- (v) In case of conception, around 20% of the value of the mother cow should be added (limited to cases where a veterinarian can confirm the conception in a pregnancy test).
- (vi) If the ability to produce milk exceeds the local average, the ability can be added. The annual average milk production of the cow (results for the latest 305 days, etc.) shall be compared with the annual average milk product in the relevant area and the specific amounts to be added shall be calculated via the following formula.

(Annual average milk production of the cow - annual average milk production in the relevant area × contracted milk price × rate of return

* The annual average milk production per individual cow shall be basically calculated using individual data such as a dairy herd performance test and if a farm lacks specific data for individuals, it shall estimate the annual average milk production per cow based on the farm-wide milk production and the number of cows producing milk.

[e.g.] Evaluation of dairy breeding cows at the time of first childbirth (about 26 months old)

Introductory price: production cost per day × rearing days × Addition for conception

{ 141,000 yen (the average purchase price of Holstein female calf 6 months of age + (546 yen × (26 - 6 months)

× 30.4 days} × 1.2

= 562,320 yen

[Dairy calf (cow)]

(1) Basic method of calculating appraised value

Delivered price + increase in value according to rearing days (increase in value per day × rearing days)

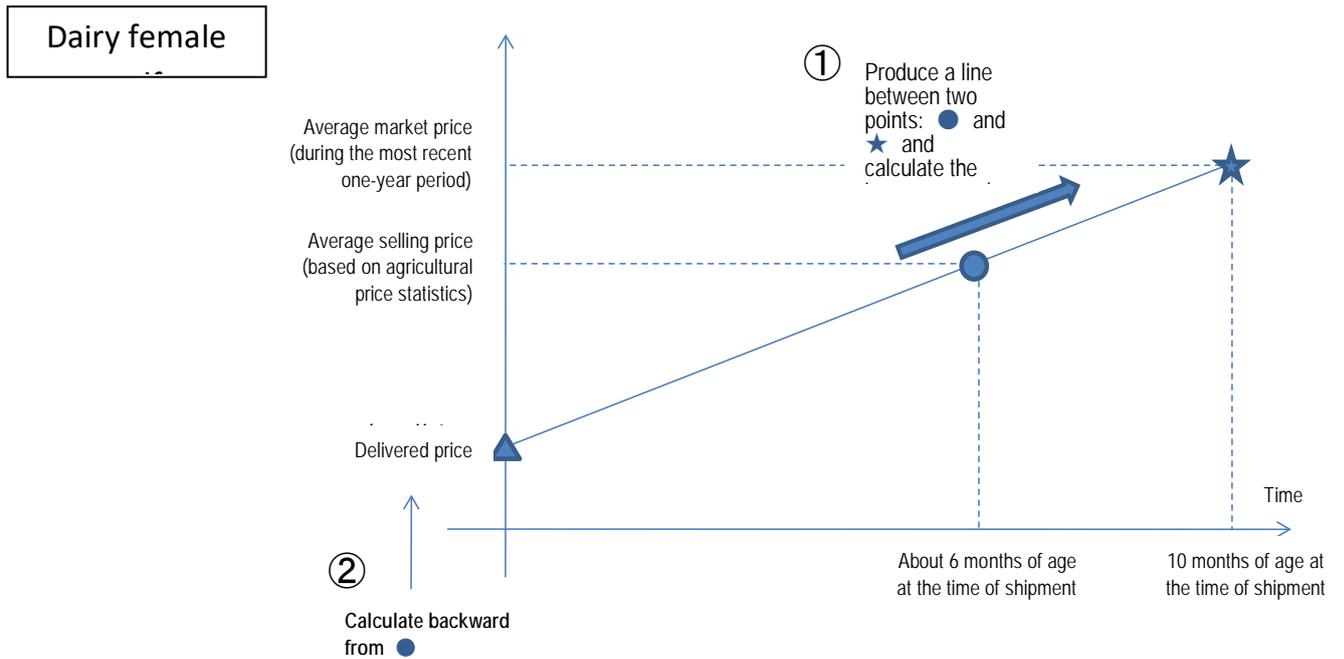
(2) Method of calculating the increase in value according to delivered price and rearing days

- (i) The increase in value per day shall be calculated based on the average selling price of pure Holstein cows (6 months of age) and the average trading price in a neighboring market (during the most recent one-year period: about 10 months of age) on agricultural price statistics.
- (ii) The delivered price shall be counted backward using the average selling price of pure Holstein cows (6 months of age) on agricultural price statistics (during the most recent one year period) and the average selling price of pure Holstein cows (about 10 months of age) in a neighboring market because there is no direct index price in the production cost survey, etc.

(iii) If the price calculated in (ii) is lower than the price calculated via the following formula using agricultural price statistics, the price shall be a delivered price and the increase per day shall be calculated based on the price and the increase per day from the average market price.

The average selling price of Holstein bull X

$$\frac{\text{the average selling price of pure Holstein cow (about 6 months old)} \times \text{the average selling price of fattening dairy bull (Holstein:6-7 months old)}}{(7-10 \text{ days after birth})}$$



* Production costs in the sentence and statistical indicators related to them are those during the preceding year, which are calculated by a prefecture as a general rule and if the prefecture cannot calculate them, it shall use the values of the national average officially announced by the Ministry of Agriculture, Forestry and Fisheries (MAFF).

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