SECTION 15.

SUIDAE

CHAPTER 15.1.

INFECTION WITH AFRICAN SWINE FEVER VIRUS

Article 15.1.1.

General provisions

Suids are the only natural non-arthropod hosts for African swine fever virus (ASFV). These include all varieties of *Sus scrofa* (pig), both domestic and *wild*, and African *wild* suid species including warthogs (*Phacochoerus* spp.), bushpigs (*Potamochoerus* spp.) and the giant forest hog *(Hylochoerus meinertzhageni)*.

For the purposes of this chapter, a distinction is made among:

– domestic and *captive wild* pigs, permanently captive or farmed free range, used for the production of *meat*, or other commercial products or use, or for breeding;

– *wild* and *feral* pigs;

– African *wild* suid species.

All varieties of *Sus scrofa* are susceptible to the pathogenic effects of ASFV, while the African *wild* suids are not and may act as reservoirs of the virus. Ticks of the genus *Ornithodoros* are the only known natural arthropod hosts of the virus and act as reservoirs and biological *vectors*.

For the purposes of the *Terrestrial Code*, African swine fever (ASF) is defined as an *infection* of suids with ASFV.

The following defines the occurrence of *infection* with ASFV:

1) ASFV has been isolated from samples from a suid;

OR

2) antigen or nucleic acid specific to ASFV has been identified in samples from a suid showing clinical signs or pathological lesions suggestive of ASF or epidemiologically linked to a suspected or confirmed *case* of ASF, or from a suid giving cause for suspicion of previous association or contact with ASFV;

OR

3) antibodies specific to ASFV have been detected in samples from a suid showing clinical signs or pathological lesions consistent with ASF, or epidemiologically linked to a suspected or confirmed *case* of ASF, or giving cause for suspicion of previous association or contact with ASFV.

For the purposes of the *Terrestrial Code*, the *incubation period* in *Sus scrofa* shall be 15 days.

Standards for diagnostic tests are described in the *Terrestrial Manual*.

Article 15.1.2.

Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any ASF-related conditions, regardless of the ASF status of the *exporting country* or *zone*:

1) *meat* in a hermetically sealed container with a F0 value of 3 or above;
2) gelatine.

Other *commodities* of suids can be traded safely if in accordance with the relevant articles of this chapter.

Article 15.1.3.

General criteria for the determination of the ASF status of a country, zone or compartment

1) ASF is a *notifiable disease* in the entire country, and all suids showing clinical signs or pathological lesions suggestive of ASF are subjected to appropriate field and *laboratory* investigations;
2) an ongoing awareness programme is in place to encourage reporting of all suids showing clinical signs or pathological lesions suggestive of ASF;
3) the *Veterinary Authority* has current knowledge of, and authority over, all domestic and *captive wild* pig *herds* in the country, *zone* or *compartment*;
4) the *Veterinary Authority* has current knowledge of the species of *wild* and *feral* pigs and African *wild* suids present, their distribution and habitat in the country or *zone*;
5) for domestic and *captive wild* pigs, an appropriate *surveillance* programme in accordance with Articles 15.1.28. to 15.1.31. and 15.1.33. is in place;
6) for *wild* and *feral* pigs, and for African *wild* suids, if present in the country or *zone*, a *surveillance* programme is in place in accordance with Article 15.1.32., considering the presence of natural and artificial boundaries, the ecology of the *wild* and *feral* pig and African *wild* suid populations and an assessment of the likelihood of ASF spread including taking into account the presence of *Ornithodoros* ticks where relevant;
7) the domestic and *captive wild* pig populations are separated by appropriate *biosecurity*, effectively implemented and supervised, from the *wild* and *feral* pig and African *wild* suid populations, based on the assessed likelihood of spread within the *wild* and *feral* pig and African *wild* suid populations, and *surveillance* in accordance with Article 15.1.32.; they are also protected from *Ornithodoros* ticks where relevant.

Article 15.1.4.

Country or zone free from ASF

1. Historical freedom

   A country or *zone* may be considered historically free from ASF without pathogen-specific *surveillance* if the provisions in Article 1.4.6. are complied with and *commodities* of suids are imported in accordance with the relevant articles of this chapter.

2. Freedom in all suids

   A country or *zone* which does not meet the conditions of point 1 above may be considered free from ASF in all suids when it complies with all the criteria of Article 15.1.3. and when:

   a) *surveillance* in accordance with Articles 15.1.28. to 15.1.33. has been in place for the past three years;
   b) there has been no *case* of *infection* with ASFV during the past three years; this period can be reduced to 12 months when the *surveillance* has demonstrated no evidence of presence or involvement of *Ornithodoros* ticks;
   c) *commodities* of suids are imported in accordance with the relevant articles of this chapter.

3. Freedom in domestic and captive wild pigs

   A country or *zone* which does not meet the conditions of point 1 or point 2(b), i.e. when there are *cases* of *infection* with ASFV in *feral* or *wild* suids, may be considered free from ASF in domestic and *captive wild* pigs when it complies with all the criteria of Article 15.1.3., especially point 7, and when:

   a) *surveillance* in accordance with Articles 15.1.28. to 15.1.33. has been in place for the past three years;

b) there has been no *case* of *infection* with ASFV in domestic or *captive wild* pigs during the past three years; this period can be reduced to 12 months when the *surveillance* has demonstrated no evidence of presence or involvement of *Ornithodoros* ticks;

c) *commodities* of suids are imported in accordance with the relevant articles of this chapter.

Article 15.1.5.

Compartment free from ASF

The establishment of *compartment* free from ASF should follow the relevant requirements of this chapter and the principles in Chapters 4.4. and 4.5.

Article 15.1.6.

Establishment of a containment zone within a country or zone free from ASF

In the event of limited *outbreaks* of ASF within a country or *zone* previously free from ASF, including within a *protection zone*, a *containment zone*, which includes all *outbreaks*, may be established for the purposes of minimising the impact on the entire country or *zone*.

In addition to the requirements for the establishment of a *containment zone* outlined in Article 4.4.7., the *surveillance* programme should take into account the presence and potential role of *Ornithodoros* ticks and of *wild* and *feral* pigs and African *wild* suids and any measures in place to avoid their dispersion.

The free status of the areas outside the *containment zone* is suspended while the *containment zone* is being established. The free status of these areas outside the *containment zone* may be reinstated irrespective of the provisions of Article 15.1.7., once the *containment zone* is clearly established. It should be demonstrated that *commodities* for *international trade* either have originated outside the *containment zone* or comply with the provisions in Articles 15.1.9., 15.1.11., 15.1.13. and Articles 15.1.15. to 15.1.21.

The recovery of the free status of the *containment zone* should follow the provisions of Article 15.1.7.

Article 15.1.7.

Recovery of free status

Should an *outbreak* of ASF occur in a previously free country or *zone*, its status may be restored three months after the *disinfection* of the last infected *establishment*, provided that:

1) a *stamping-out policy* has been implemented and, in the case where ticks are suspected or known to be involved in the epidemiology of the *infection*, has been followed by the use of sentinel pigs in the infected *establishments* for two months;

2) *surveillance* in accordance with Article 15.1.31. has been carried out with negative results.

Otherwise, the provisions of point 2 of Article 15.1.4. apply.

Article 15.1.8.

Recommendations for importation from countries, zones or compartments free from ASF

For domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the animals showed no clinical sign of ASF on the day of shipment;

2) the animals were kept in a country, *zone* or *compartment* free from ASF since birth or for at least the past three months;

3) if the animals are exported from a free *zone* or *compartment* within an infected country or *infected zone*, necessary precautions were taken to avoid contact with any source of ASFV until shipment.

Article 15.1.9.

Recommendations for importation from countries or zones not free from ASF

For domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the animals:

1) showed no clinical sign of ASF on the day of shipment;
2) and either:
   a) were kept since birth or for the past three months in a *compartment* free from ASF; or
   b) were kept in a *quarantine station*, isolated for 30 days prior to shipment, and were subjected to a virological test and a serological test performed at least 21 days after entry into the *quarantine station*, with negative results.

Article 15.1.10.

Recommendations for importation from countries, zones or compartments free from ASF

For semen of domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the donor males:
   a) were kept in a country, *zone* or *compartment* free from ASF since birth or for at least three months prior to collection;
   b) showed no clinical sign of ASF on the day of collection of the semen;
2) the semen was collected, processed and stored in accordance with Chapters 4.6. and 4.7.

Article 15.1.11.

Recommendations for importation from countries or zones not free from ASF

For semen of domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the donor males:
   a) were kept since birth or for at least three months prior to collection in an *establishment*, in which *surveillance* in accordance with Articles 15.1.28. to 15.1.30. demonstrates that no *case* of ASF has occurred in the past three years; this period can be reduced to 12 months when the *surveillance* demonstrates that there is no evidence of tick involvement in the epidemiology of the *infection*;
   b) showed no clinical sign of ASF on the day of collection of the semen;
2) the semen was collected, processed and stored in accordance with Chapters 4.6. and 4.7.

Article 15.1.12.

Recommendations for importation from countries, zones or compartments free from ASF

For *in vivo* derived embryos of domestic pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the donor females:
   a) were kept in a country, *zone* or *compartment* free from ASF since birth or for at least three months prior to collection;
   b) showed no clinical sign of ASF on the day of collection of the embryos;
2) the semen used to fertilise the oocytes complied with the conditions referred to in Article 15.1.10. or Article 15.1.11., as relevant;
3) the embryos were collected, processed and stored in accordance with the relevant provisions of Chapters 4.8. and 4.10.

Article 15.1.13.

Recommendations for importation from countries or zones not free from ASF

For *in vivo* derived embryos of domestic pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the donor females:
   a) were kept since birth or for at least three months prior to collection in an *establishment*, in which *surveillance* in accordance with Articles 15.1.28. to 15.1.30. demonstrates that no *case* of ASF has occurred in the past three years; this period can be reduced to 12 months when the *surveillance* demonstrates that there is no evidence of tick involvement in the epidemiology of the *infection*;
   b) showed no clinical sign of ASF on the day of collection of the embryos;
   c) were subjected to a serological test performed at least 21 days after collection, with negative results;
2) the semen used to fertilise the oocytes complied with the conditions referred to in Article 15.1.10. or Article15.1.11., as relevant;
3) the embryos were collected, processed and stored in accordance with the relevant provisions of Chapters 4.8. and 4.10.

Article 15.1.14.

Recommendations for importation from countries, zones or compartments free from ASF

For fresh meat of domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the entire consignment of *fresh meat* comes from animals which:

1) have been kept in a country, *zone* or *compartment* free from ASF since birth or have been imported or introduced in accordance with Article 15.1.8. or Article 15.1.9.;
2) have been slaughtered in an approved *slaughterhouse/abattoir*, where they have been subjected with favourable results to ante- and post-mortem inspections in accordance with Chapter 6.3.

Article 15.1.15.

Recommendations for importation from countries or zones not free from ASF

For fresh meat of domestic and captive wild pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that:

1) the entire consignment of *fresh meat* comes from animals which originated from *herds* in which *surveillance* in accordance with Articles 15.1.28. to 15.1.30. demonstrates that no *case* of ASF has occurred in the past three years. This period can be reduced to 12 months when the *surveillance* demonstrates that there is no evidence of tick involvement in the epidemiology of the *infection*. In addition, samples from a statistically representative number of animals were tested for ASF, with negative results;
2) the entire consignment of *fresh meat* comes from animals which have been slaughtered in an approved *slaughterhouse/abattoir*, have been subjected with favourable results to ante- and post-mortem inspections in accordance with Chapter 6.3.;
3) necessary precautions have been taken after *slaughter* to avoid contact of the *fresh meat* with any source of ASFV.

Article 15.1.16.

Recommendations for importation of fresh meat of wild and feral pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the entire consignment of *fresh meat* comes from animals which:

1) have been killed in a country or *zone* free from ASF in accordance with point 1 or point 2 of Article 15.1.4.;
2) have been subjected with favourable results to a post-mortem inspection in accordance with Chapter 6.3. in an examination facility approved by the *Veterinary Authority* for export purposes.

Article 15.1.17.

Recommendations for the importation of meat products of pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the products:

1) have been prepared:
   a) exclusively from *fresh meat* meeting the relevant conditions in Articles 15.1.14., 15.1.15. and 15.1.16.;
   b) in a processing facility:
      i) approved by the *Veterinary Authority* for export purposes;
      ii) processing only *meat* meeting the relevant conditions in Articles 15.1.14., 15.1.15. and 15.1.16.;

OR

2) have been processed in a facility approved by the *Veterinary Authority* for export purposes so as to ensure the destruction of ASFV in accordance with Article 15.1.23., and that the necessary precautions were taken after processing to avoid contact of the product with any source of ASFV.

Article 15.1.18.

Recommendations for the importation of bristles from pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that bristles:

1) originated from domestic or *captive wild* pigs in a country, *zone* or *compartment* free from ASF and have been processed in a facility approved by the *Veterinary Authority* for export purposes; or
2) have been processed in a facility approved by the *Veterinary Authority* for export purposes so as to ensure the destruction of ASFV in accordance with one of the processes listed in Article 15.1.26., and that the necessary precautions were taken after processing to avoid contact of the product with any source of ASFV.

Article 15.1.19.

Recommendations for the importation of litter and manure from pigs

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that these products:

1) originated from domestic or *captive wild* pigs in a country, *zone* or *compartment* free from ASF; or
2) have been processed in a facility approved by the *Veterinary Authority* for export purposes so as to ensure the destruction of the ASFV in accordance with one of the processes listed in Article 15.1.27., and that the necessary precautions were taken after processing to avoid contact of the product with any source of ASFV.

Article 15.1.20.

Recommendations for the importation of skins and trophies from suids

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the products:

1) originated from suids in a country or *zone* free from ASF in accordance with point 1 or point 2 of Article 15.1.4. and have been processed in a facility approved by the *Veterinary Authority* for export purposes; or
2) originated from domestic or *captive wild* pigs in a country, *zone* or *compartment* free from ASF and have been processed in a facility approved by the *Veterinary Authority* for export purposes; or
3) have been processed in a facility approved by the *Veterinary Authority* for export purposes so as to ensure the destruction of ASFV in accordance with one of the procedures referred to in Article 15.1.25., and that the necessary precautions were taken after processing to avoid contact of the product with any source of ASFV.

Article 15.1.21.

Recommendations for the importation of other pig products

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that these products:

1) originated from domestic or *captive wild* pigs in a country, *zone* or *compartment* free from ASF and have been prepared in a processing facility approved by the *Veterinary Authority* for export purposes;

OR

2) have been processed in a facility approved by the *Veterinary Authority* for export purposes so as to ensure the destruction of ASFV, and that the necessary precautions were taken after processing to avoid contact of the product with any source of ASFV.

Article 15.1.22.

Procedures for the inactivation of ASFV in swill

For the inactivation of ASFV in swill, one of the following procedures should be used:

1) the swill is maintained at a temperature of at least 90°C for at least 60 minutes, with continuous stirring; or
2) the swill is maintained at a temperature of at least 121°C for at least 10 minutes at an absolute pressure of 3 bar; or
3) the swill is subjected to an equivalent treatment that has been demonstrated to inactivate ASFV.

Article 15.1.23.

Procedures for the inactivation of ASFV in meat

For the inactivation of ASFV in *meat*, one of the following procedures should be used:

1. Heat treatment

   Meat should be subjected to:

   a) heat treatment for at least 30 minutes at a minimum temperature of 70°C, which should be reached throughout the *meat*; or

   b) any equivalent heat treatment which has been demonstrated to inactivate ASFV in *meat*.

2. Dry cured pig meat

   Meat should be cured with salt and dried for a minimum of six months.

Article 15.1.24.

Procedures for the inactivation of ASFV in casings of pigs

For the inactivation of ASFV in *casings* of pigs, the following procedures should be used: treating for at least 30 days either with dry salt (NaCl) or with saturated brine (Aw < 0.80), or with phosphate supplemented dry salt containing 86.5% NaCl, 10.7% Na_2HPO_4 and 2.8% Na_3PO_4 (weight/weight/weight) at a temperature of 12°C or above.

Article 15.1.25.

Procedures for the inactivation of ASFV in skins and trophies

For the inactivation of ASFV in skins and trophies, one of the following procedures should be used:

1) boiling in water for an appropriate time so as to ensure that any matter other than bone, tusks or teeth is removed; or
2) soaking, with agitation, in a 4% (w/v) solution of washing soda (sodium carbonate-Na_2CO_3) maintained at pH 11.5 or above for at least 48 hours; or

3) soaking, with agitation, in a formic acid solution (100 kg salt [NaCl] and 12 kg formic acid per 1,000 litres water) maintained below pH 3.0 for at least 48 hours; wetting and dressing agents may be added; or
4) in the case of raw hides, treating for at least 28 days with salt (NaCl) containing 2% washing soda (sodium carbonate-Na_2CO_3); or
5) treatment with 1% formalin for a minimum of six days.

Article 15.1.26.

Procedures for the inactivation of ASFV in bristles

For the inactivation of ASFV in bristles for industrial use, one of the following procedures should be used:

1) boiling for at least 30 minutes;
2) immersion for at least 24 hours in a 1% solution of formaldehyde.

Article 15.1.27.

Procedures for the inactivation of ASFV in litter and manure from pigs

For the inactivation of ASFV in litter and manure of pigs, one of the following procedures should be used:

1) moist heat treatment for at least one hour at a minimum temperature of 55°C;
2) moist heat treatment for at least 30 minutes at a minimum temperature of 70°C.

Article 15.1.28.

Introduction to surveillance

Articles 15.1.28. to 15.1.33. provide recommendations for *surveillance* for ASF, and are complementary to Chapters 1.4. and 1.5. The impact and epidemiology of ASF may vary in different regions of the world, as does the routine *biosecurity* in different production systems. The *surveillance* strategies employed for determining ASF status should be adapted to the situation. The approach used should take into account the presence of *wild* or *feral* pigs or African *wild* suids, the presence of *Ornithodoros* ticks, and the presence of ASF in adjacent countries or *zones*.

Surveillance for ASF should be in the form of an ongoing programme designed to establish that susceptible populations in a country, *zone* or *compartment* are free from *infection* with ASFV or to detect the introduction of ASFV into a free population. Consideration should be given to the specific characteristics of ASF epidemiology which include:

– the role of swill feeding;
– the impact of different systems of production of domestic and *captive wild* pigs;
– the role of *wild* and *feral* pigs and African *wild* suids on the maintenance and spread of the disease;
– whether *Ornithodoros* ticks are present and the role they may play in the maintenance and spread of the disease;
– the lack of pathognomonic gross lesions and clinical signs;
– the occurrence of carriers;
– the genotypic variability of ASFV.

Article 15.1.29.

General conditions and methods for surveillance

1) A *surveillance* system in accordance with Chapter 1.4. and under the responsibility of the *Veterinary Authority* should address the following:
    a) a formal and ongoing system for detecting and investigating *cases* of ASF;
    b) a procedure for the rapid collection and transport of samples from suspected *cases* to a *laboratory*;
    c) appropriate *laboratory* testing capability for ASF diagnosis;
    d) a system for recording, managing and analysing diagnostic and *surveillance* data.

2) The ASF *surveillance* programme should:

a) include an *early warning system* throughout the production, marketing and processing chain for reporting suspected *cases*. Diagnosticians and those with regular contact with pigs should report promptly any suspicion of ASF to the *Veterinary Authority*. The reporting system under the *Veterinary Authority* should be supported directly or indirectly (e.g. through private *veterinarians* or *veterinary paraprofessionals*) by government or private sector awareness programmes targeted to all relevant stakeholders. Personnel responsible for *surveillance* should be able to seek expertise in ASF diagnosis, epidemiological evaluation and control;

b) conduct, when relevant, regular and frequent clinical inspections and *laboratory* testing of high-risk groups (for example, where swill feeding is practised), or those adjacent to an ASF infected country or *zone* (for example, bordering areas where infected *wild* and *feral* pigs or African *wild* suids are present).

Article 15.1.30.

Surveillance strategies

1. Introduction

The population covered by *surveillance* aimed at detecting disease and *infection* should include domestic, *captive wild*, *wild* and *feral* suid populations within the country or *zone*. *Surveillance* should be composed of random and non-random approaches using clinical, virological and serological methods appropriate for the *infection* status of the country or *zone*.

The strategy employed to establish the *prevalence* or absence of *infection* with ASFV may be based on randomised or non-randomised clinical investigation or sampling at an acceptable level of statistical confidence. If an increased likelihood of *infection* in particular localities or *subpopulations* can be identified, targeted sampling may be an appropriate strategy. This may include:

a) specific high-risk *wild* and *feral* suid populations and their proximity;

b) farms which *feed* swill;

c) pigs reared outdoors.

Risk factors may include, for example, temporal and spatial distribution of past *outbreaks*, and pig movements and demographics.

Member Countries should review their *surveillance* strategies whenever an increase in the *risk* of incursion of ASFV is perceived. Such changes include but are not limited to:

– an emergence or an increase in the *prevalence* of ASF in countries or *zones* from which live pigs or products are imported;

– an increase in the *prevalence* of ASF in *wild* or *feral* suids in the country or *zone*;

– an increase in the *prevalence* of ASF in adjacent countries or *zones*;

– an increased entry of, or exposure to, infected *wild* or *feral* suid populations from adjacent countries or *zones*;

– evidence of involvement of ticks in the epidemiology of ASF as demonstrated by *surveillance* implemented in accordance with Chapter 1.5.

2. Clinical surveillance

Clinical *surveillance* is the most effective tool for detecting ASF due to severe clinical signs and pathology associated with *infection* with ASFV. However, due to the clinical similarity with other diseases such as classical swine fever, porcine reproductive and respiratory syndrome and erysipelas, and those associated with porcine circovirus 2 *infection*, clinical *surveillance* should be supplemented, as appropriate, by serological and virological *surveillance*.

Clinical signs and pathological findings are useful for early detection; in particular, any *cases* where clinical signs or lesions suggestive of ASF are accompanied by high mortality should be investigated without delay.

Wild and *feral* suids rarely present the opportunity for clinical observation, but should form part of any *surveillance* scheme and should, ideally, be monitored for virus as well as antibodies.

3. Virological surveillance

Virological *surveillance* is important for early detection, differential diagnosis and for systematic sampling of target populations. It should be conducted:

a) to investigate clinically suspected *cases*;

b) to monitor at risk populations;

c) to follow up positive serological results;

d) to investigate increased mortality when ASF cannot be ruled out;

e) to confirm eradication after a *stamping-out policy* has been applied.

Molecular detection methods can be applied to large-scale screening for the presence of virus. If targeted at high-risk groups, they provide an opportunity for early detection that can considerably reduce the subsequent spread of ASFV. Epidemiological understanding of the pathways of spread of ASFV can be greatly enhanced by molecular analyses of viruses in endemic areas and those involved in *outbreaks* in areas previously free from ASF. Therefore, ASFV isolates should be sent to an OIE Reference Laboratory for further characterisation.

4. Serological surveillance

Serology is an effective and efficient *surveillance* tool. Serological *surveillance* aims at detecting antibodies against ASFV. Positive ASFV antibody test results can indicate an ongoing or past *outbreaks*, since some animals may recover and remain seropositive for a significant period, possibly life. This may include carrier animals. However, ASF serology is not suitable for early detection.

It may be possible to use sera collected for other survey purposes for ASF *surveillance*. However, the principles of survey design and the requirement for statistical validity should not be compromised.

Article 15.1.31.

Surveillance for recovery of free status

In addition to the general conditions described in Articles 15.1.4. and 15.1.7., a Member Country seeking recovery of free status for the entire country or a *zone*, including for a *containment zone*, should show evidence of an active *surveillance* programme to demonstrate no evidence of *infection* with ASFV.

The domestic and *captive wild* pig populations should undergo regular clinical and pathological examinations and virological and serological testing, planned and implemented according to the general conditions and methods described in this chapter.

This *surveillance* programme should include:

1) *establishments* in the proximity of the *outbreaks*;
2) *establishments* epidemiologically linked to the *outbreaks*;
3) animals moved from or used as sentinels or to repopulate affected *establishments*;
4) all *establishments* where contiguous culling has been carried out;
5) *wild* and *feral* suid populations in the area of the *outbreaks*.

Article 15.1.32.

Surveillance for ASFV in wild and feral pigs and African wild suids

1) The objective of a *surveillance* programme is either to demonstrate that *infection* with ASFV is not present in *wild* and *feral* suids or, if known to be present, to estimate the geographical distribution of the *infection*.

   Surveillance in *wild* and *feral* suids presents additional challenges including:

   a) determination of the distribution, size and movement patterns of the *wild* and *feral* suid population;

   b) relevance and practicality of assessing the possible presence of *infection* with ASFV in the population;

   c) determination of the practicability of establishing a *zone* taking into account the degree of interaction with domestic and *captive wild* pigs within the proposed *zone*.

   The geographic distribution and estimated size of *wild* and *feral* suid populations should be assessed as a prerequisite for designing a population monitoring system following Chapter 1.4.

2) For implementation of the *surveillance* programme, the limits of the area over which *wild* and *feral* pigs range should be defined. *Subpopulations* of *wild* and *feral* suids may be separated from each other by natural or artificial barriers.

3) The *surveillance* programme should include animals found dead, road kills, animals showing abnormal behaviour and hunted animals, and should also include awareness campaigns targeted at hunters and farmers.

4) There may be situations where a more targeted *surveillance* programme can provide additional assurance. The criteria to define high risk areas for targeted *surveillance* include:

   a) areas with past history of ASF;

b) subregions with large populations of *wild* or *feral* pigs or African *wild* suids;
c) border regions with ASF affected countries or *zones*;
d) interface between *wild* and *feral* pig populations, and domestic and *captive wild* pig populations;
e) areas with farms with free-ranging and outdoor pigs;
f) areas with a high level of hunting activity, where animal dispersion and feeding as well as inappropriate disposal of waste can occur;
g) other risk areas determined by the *Veterinary Authority* such as ports, airports, garbage dumps and picnic and camping areas.

Article 15.1.33.

Surveillance for arthropod vectors

Vector surveillance aims at defining the type and distribution of ticks of the genus *Ornithodoros*. Any species of *Ornithodoros* should be considered to be a potential *vector* or reservoir of ASFV. The virus is generally transmitted transstadially. Transovarial transmission has been observed only in ticks of the *Ornithodoros moubata* complex.

The *Veterinary Authority* should have knowledge of the presence, distribution and identity of *Ornithodoros*, taking into account climatic or habitat changes that may affect distribution.

When *vector surveillance* is considered necessary, a sampling plan in accordance with Chapter 1.5. should take into account the biology and ecology of species present and, in particular, the favoured habitat of these species in burrows and structures associated with pig production. The plan should also take into account the distribution and density of pigs in the country or *zone*.

Sampling methods include CO_2 trapping and flagging, and vacuuming of burrows or structures.

NB: FIRST ADOPTED IN 1968; MOST RECENT UPDATE ADOPTED IN 2019.