

TERRESTRIAL ANIMAL HEALTH STANDARDS COMMISSION

FEBRUARY 2013 REPORT

CHAPTER 9.2.

INFECTION AMERICAN FOULBROOD OF HONEY BEES
WITH PAENIBACILLUS LARVAE
(AMERICAN FOULBROOD)

Article 9.2.1.

General provisions

For the purposes of the *Terrestrial Code* this Chapter, American foulbrood is a *disease* of the larval and pupal stages of the honey bees (species of the genus *Apis*) *mellifera* and other *Apis* spp. caused by *Paenibacillus larvae*, which is widely distributed and occurs in most countries where such bees are kept. *Paenibacillus larvae*, the causative organism, is a bacterium that can produce over one billion spores in each infected larva. The spores are very long-living and extremely resistant to heat and chemical agents, and only the spores are capable of inducing the *disease*.

Combs with American foulbrood infected pre-imago honey bees of infected apiaries may show distinctive clinical signs which can allow the *disease* to be diagnosed in the field. However, subclinical infections are common and require laboratory diagnosis. However, subclinical infections are common and require laboratory diagnosis.

For the purposes of the *Terrestrial Code*, the incubation period for American foulbrood shall be 15 days (not including the wintering period which may vary according to country).

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

When authorising import or transit of the commodities covered in the chapter, with the exception of those listed in Article 9.2.2., Veterinary Authorities should require the conditions prescribed in this chapter relevant to the American foulbrood status of the honey bee population of the exporting country or zone.

Article 9.2.2.

Trade in Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any American foulbrood related conditions, regardless of the American foulbrood status of the honey bee population of the *exporting country or zone*:

- 1) honey bee semen;
- 2) honey bee venom;
- 3) honey bee eggs.

~~When authorising import or transit of other commodities listed in this Chapter, Veterinary Authorities should require the conditions prescribed in this Chapter relevant to the American foulbrood status of the honey bee population of the exporting country or zone.~~

Article 9.2.3.

Determination of the American foulbrood status of a country or zone/~~compartment~~

The American foulbrood status of a country or ~~zone/compartment (under study)~~ can only be determined after considering the following criteria:

- 1) a *risk assessment* has been conducted, identifying all potential factors for American foulbrood occurrence and their historic perspective;
- 2) American foulbrood should be notifiable in the whole country or ~~zone/compartment (under study)~~ and all clinical signs suggestive of American foulbrood should be subjected to field ~~and/or~~ laboratory investigations;
- 3) an on-going awareness programme should be in place to encourage reporting of all cases suggestive of American foulbrood;
- 4) the *Veterinary Authority* or other *Competent Authority* with responsibility for reporting and control of *diseases* of honey bees should have current knowledge of, and authority over, all domesticated *apiaries* in the country.

Article 9.2.4.

Country or zone/~~compartment (under study)~~ free from American foulbrood1. Historically free status

A country or ~~zone/compartment (under study)~~ may be considered free from the *disease* after conducting a *risk assessment* as referred to in Article 9.2.3. but without formally applying a specific *surveillance* programme if the country or ~~zone/compartment (under study)~~ complies with the provisions of Chapter 1.4.

2. Free status as a result of an eradication programme

A country or ~~zone/compartment (under study)~~ which does not meet the conditions of point 1 above may be considered free from American foulbrood after conducting a *risk assessment* as referred to in Article 9.2.3. and when:

- a) the *Veterinary Authority* or other *Competent Authority* with responsibility for reporting and control of *diseases* of honey bees has current knowledge of, and authority over, all domesticated *apiaries* existing in the country or ~~zone/compartment (under study)~~;
- b) American foulbrood is notifiable in the whole country or ~~zone/compartment (under study)~~, and any clinical cases suggestive of American foulbrood are subjected to field ~~and/or~~ laboratory investigations;
- c) for the 5 years following the last reported isolation of the American foulbrood agent, annual surveys supervised by the *Veterinary Authority* or other *Competent Authority*, with ~~no positive~~ negative results, have been carried out on a representative sample of *apiaries* in the country or ~~zone/compartment (under study)~~ to provide a confidence level of at least 95% of detecting American foulbrood if at least 1% of the *apiaries* were infected at a within-*apiary* prevalence rate of at least 5% of the hives; such surveys may be targeted towards areas with the last reported isolation of the American foulbrood agent;
- d) to maintain free status, an annual survey supervised by the *Veterinary Authority* or other *Competent Authority*, with ~~no positive~~ negative results, is carried out on a representative sample of hives in the country or ~~zone/compartment (under study)~~ to indicate that there has been no new isolations; such surveys may be targeted towards areas with a higher likelihood of isolation;
- e) ~~(under study)~~ either there is no wild or self-sustaining feral population of species of the genus *Apis* *A. mellifera* or other possible host species in the country or zone/compartment (under study), or there is an ongoing surveillance programme of the wild or self-sustaining feral population of species of the genus *Apis* which demonstrates no evidence of the presence of the disease in the country or zone;

- f) all equipment associated with previously infected *apiaries* has been sterilised or destroyed;
- g) the importation of the *commodities* listed in this Chapter into the country or ~~zone/compartiment (under study)~~ is carried out in conformity with the recommendations of this Chapter.

Article 9.2.5.

Recommendations for the importation of live queen ~~honey bees~~, worker bees and drones honey bees with or without associated brood combs

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

- 1) the honey bees come from an *apiariesy* situated in a country or ~~zone/compartiment (under study)~~ officially free from American foulbrood ~~or the *apiary* meets the conditions prescribed in Article 4.14.3.; or~~
- 2) the shipment comprises only honey bees without associated brood combs and:
 - a) the honey bees come from an *apiariesy* meeting the conditions prescribed in Article 4.14.5.; and
 - b) the *apiary* where the honey bees come from is situated in the centre of an area with a radius of 3 kilometres where there has been no *outbreak* of American foulbrood during the past 30 days.

Article 9.2.6.

Recommendations for the importation of ~~eggs~~, larvae and pupae of honey bees

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

- 1) come from an *apiariesy* situated in ~~were sourced from a free~~ country or ~~zone/compartiment (under study)~~ free from American foulbrood; or
- 2) have been isolated from queens in a *quarantine station*, and all workers which accompanied the queen or a representative sample of ~~eggs or~~ larvae were examined for the presence of *P. larvae* by bacterial culture or PCR in accordance with the *Terrestrial Manual*.

Article 9.2.7.

Recommendations for the importation of used apicultural equipment ~~associated with beekeeping~~

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

- 1) comes from an *apiariesy* situated in a country or *zone* free from American foulbrood; or
- 2) was sterilised under the supervision of the *Veterinary Authority* in conformity with one of the following procedures:
 - a) by irradiation with 10 kGy (suitable for all the used equipment); or
 - b) by either immersion in 1% sodium hypochlorite for at least 30 minutes (suitable only for non-porous materials such as plastic and metal); ~~gamma irradiation using a cobalt-60 source at a dose rate of 10 kGy,~~ or
 - c) by immersion for at least 10 minutes in molten paraffin wax heated to 160°C (suitable only for wooden equipment); or ~~processing to ensure the destruction of both bacillary and spore forms of *P. larvae*, in conformity with one of the procedures referred to in Chapter X.X. recommended by the OIE (under study).~~

- d) by any procedure of equivalent efficacy recognised by the Veterinary Authority of the importing and exporting countries.

Article 9.2.8.

Recommendations for the importation of honey, honey bee-collected pollen, beeswax, propolis and royal jelly for use in apiculture

Veterinary Authorities of importing countries officially free from American foulbrood should require the presentation of an international veterinary certificate attesting that the commodities products:

- 1) come from an apiaries situated ~~were collected~~ in a country or zone~~compartment (under study)~~ free from American foulbrood; or
- 2) have been processed to ensure the destruction of both bacillary and spore forms of *P. larvae* by irradiation with 10 kGy or any procedure of equivalent efficacy recognised by the Veterinary Authority of the importing and exporting countries; in conformity with one of the procedures referred to in Chapter X.X. recommended by the OIE (under study); or
- 3) have been found free from spore forms of *P. larvae* by a test method described in the relevant chapter of the Terrestrial Manual.

Article 9.2.9.

Recommendations for the importation of honey, honey bee-collected pollen, beeswax, propolis and royal jelly for human consumption

Veterinary Authorities of importing countries free from American foulbrood should require the presentation of an international veterinary certificate attesting that the products:

- 1) come from an apiaries situated in a country or zone free from American foulbrood; or
- 2) have been processed to ensure the destruction of both bacillary and spore forms of *P. larvae* by irradiation with 10 kGy or any procedure of equivalent efficacy recognised by the Veterinary Authority of the importing and exporting countries; or
- 3) have been found free from spore forms of *P. larvae* by a test method described in the relevant chapter of the Terrestrial Manual.