

# OIE standards and tools with regards to diseases of honey bees



OIE Regional training seminar on diseases of honey bees for OIE national focal points for animal disease notification to the OIE

14 – 17 June 2011, Ezulwini, Swaziland

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**OIE Scientific and Technical Department**

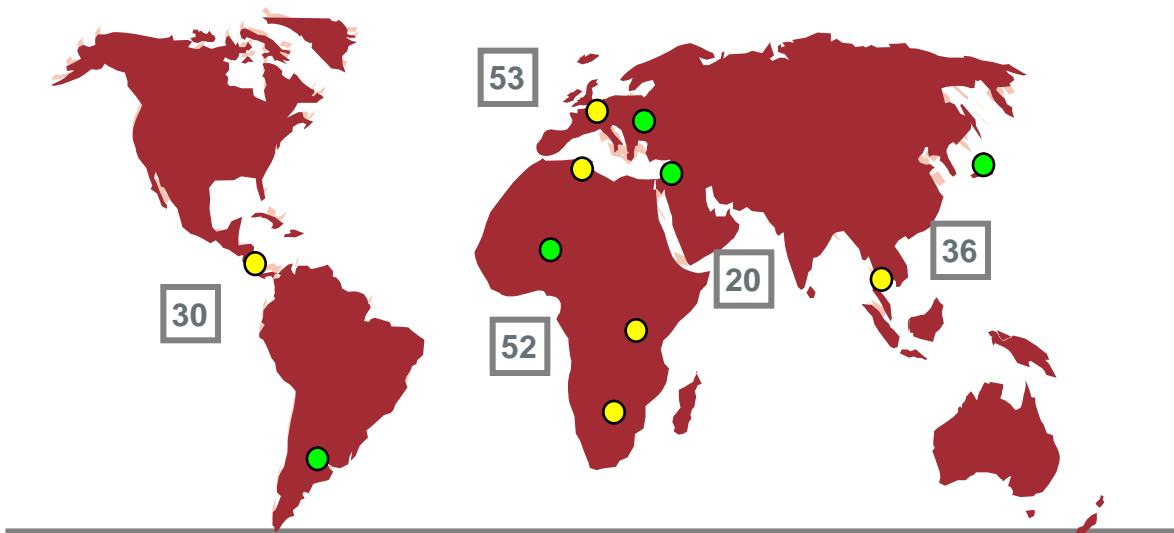
# Introduction

- Overview of the OIE
- OIE standards (standards, guidelines and recommendations) related to diseases of honey bees
- Other OIE tools relevant for diseases of honey bees

# OVERVIEW OF THE OIE

# WORLD ORGANISATION FOR ANIMAL HEALTH (OIE)

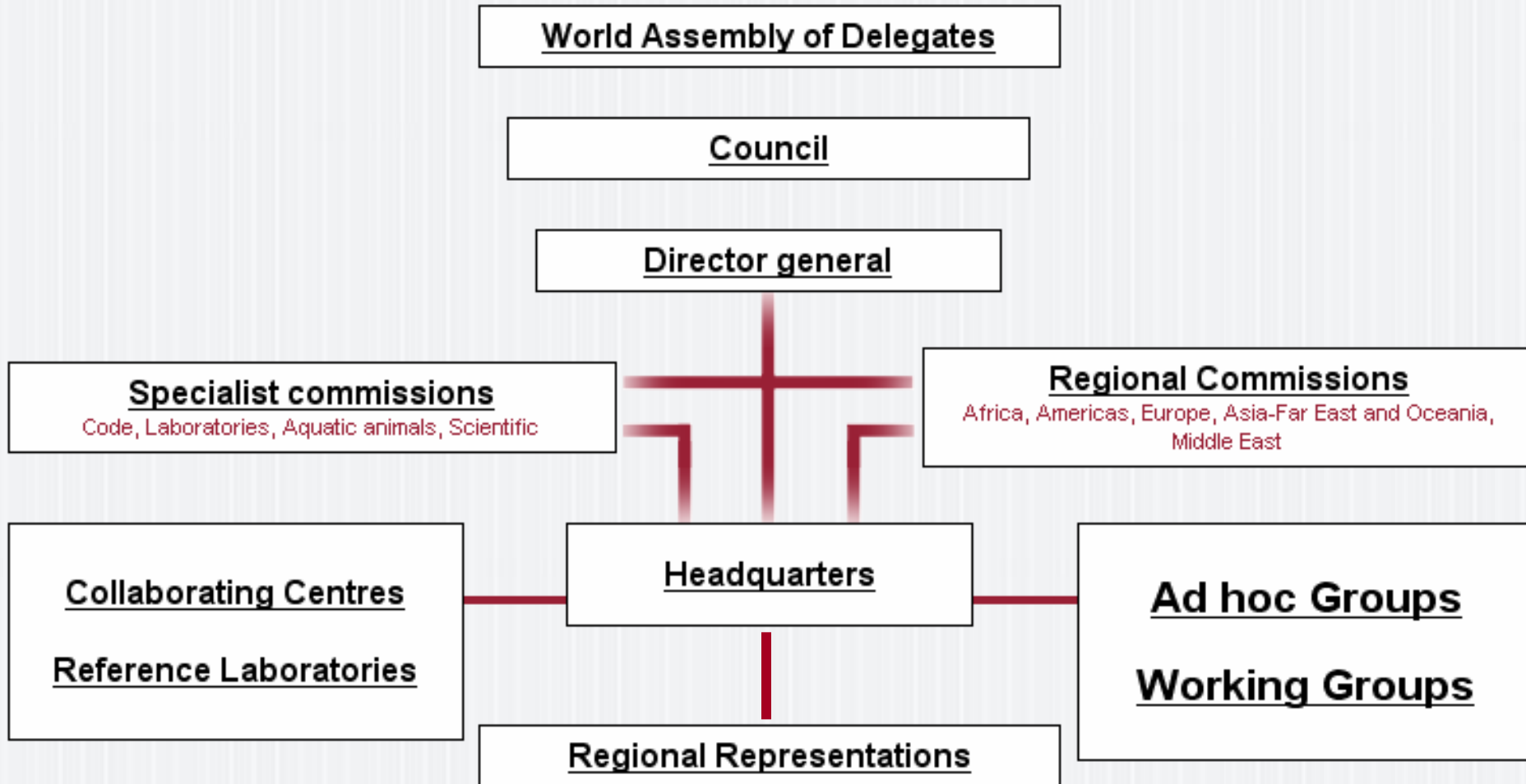
- An intergovernmental organisation, founded in 1924
- 178 Members (In June 2011)
- Headquarters in Paris, France
  - 5 Regional offices
  - 6 Regional sub offices



Some Members belong to more than one Region

# Structure of the OIE

## Structure





**OIE Global Mandate: “to improve animal health, veterinary public health and animal welfare world-wide”**

# OIE Key Missions

- Ensure transparency of the global animal diseases situation including zoonoses
  - Notification of the epidemiological situation from all the OIE Member Countries to the OIE for a limited number of diseases listed by the OIE and regularly updated as well as for emerging diseases with significant morbidity or mortality, or zoonotic potential.
  - Currently, **six bee diseases** are present on this OIE list: Acarapisosis of honey bees, American foulbrood of honey bees, European foulbrood of honey bees, Small hive beetle infestation (*Aethina tumida*), Tropilaelaps infestation of honey bees and Varroosis of honey bees.

# OIE Key Missions (contd)

- Collect, analyse and disseminate veterinary scientific information
- Provide expertise and encourage international solidarity on disease control



# OIE Key Missions (contd)

- Within its mandate under the WTO SPS Agreement, to safeguard world trade by publishing sanitary standards for international trade in animals and animal products
- To improve the legal framework and resources of national Veterinary Services
- To better guarantee the safety of food of animal origin and to promote animal welfare through a science-based approach

# OIE STANDARDS RELATED TO DISEASES OF HONEY BEES

# OIE standards

OIE develops standards in relation with its mandate:

- for the prevention and control of animal diseases as well as for the safe trade of animals and animals products (mandated under the SPS agreement of the WTO for this)
- for diagnostic tests and vaccines as well as for veterinary laboratories
- for animal production food safety and to promote science-based animal welfare

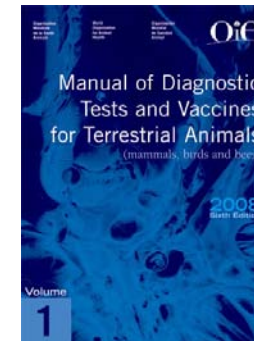
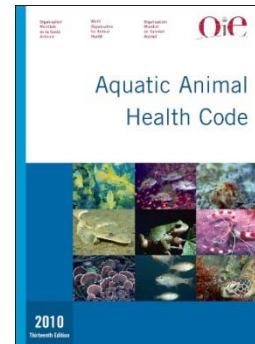
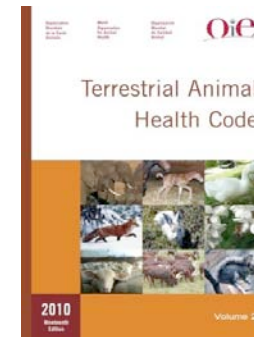
# OIE standards

***Terrestrial Animal Health Code – mammals, birds and bees***

***Aquatic Animal Health Code – fish, molluscs and crustaceans***

***Manual of Diagnostic Tests and Vaccines for Terrestrial Animals***

***Manual of Diagnostic Tests for Aquatic Animals***



# General process for setting and updating OIE standards



# Process for setting and updating OIE Standards

In summary:

**Texts developed using a science-based approach**

**The elected Specialist Commissions, with help from experts, have the task of formulating proposals following a transparent process**

**The Delegates decide whether or not to adopt the proposed texts (Democratic system)**



***Terrestrial Animal  
Health Code***

—

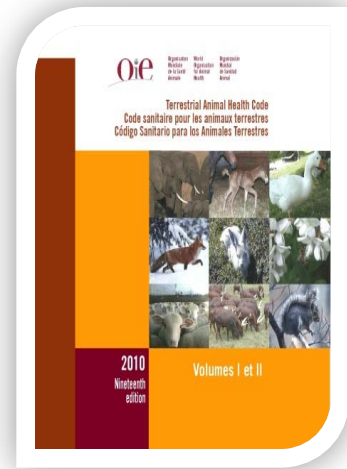
**Relevant parts  
for honey bees**

# A. Terrestrial Animal Health Code, 2010

**Aim:** to assure the sanitary safety of international trade in terrestrial animals and their products, while avoiding unjustified sanitary barriers.

It is also an essential tool for supporting the mandate of the OIE in the area of improving animal health and welfare world-wide.

**Achieved through the detailing of health measures** to be used by the veterinary authorities





# A. Terrestrial Animal Health Code, 2010

## 2 volumes:

- 1 volume of General provisions: 54 chapters
- 1 volume of recommendations applicable to OIE Listed diseases and other diseases of importance to international trade: 78 chapters

First published in 1968 and since 1998 has been published every year.

All the chapters are available on the OIE website at:

<http://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/>

# A. Terrestrial Animal Health Code, 2010

## Chapters relevant for the honey bees in the *Terrestrial Code*:

- Chapter 4.14., Hygiene and disease security procedures in apiaries
- Chapter 5.10., Model Veterinary Certificates for International Trade ..., art. 5.10.5.
- Chapters 9.1. to 9.6. covering the six honey bee diseases included in the OIE List

# A. Terrestrial Animal Health Code, 2010

Chapters relevant for the honey bees in the  
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- **Chapter 4.14., Hygiene and disease security procedures in apiaries**
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# A. Terrestrial Animal Health Code, 2010

## Chapter 4.14. Hygiene and disease security procedures in apiaries - art 4.14.1.: Outline of its content

In each country, official health control of bee diseases should include:

1. An organisation for permanent health surveillance (art. 4.14.2.);
2. Approval of breeding apiaries for export trade (art. 4.14.3.);
3. Measures for cleaning, disinfection and disinfectation of apicultural equipment (art. 4.14.4.);
4. Rules precisely stating the requirements for issuing an international veterinary certificate (art. 4.14.5.).

# A. Terrestrial Animal Health Code, 2010

## Chapter 4.14. - Art. 4.14.2.: Organisation for permanent official sanitary surveillance of apiaries

Under the authority of the Veterinary Authority, the official surveillance service should be entrusted with the following tasks:

- Visit apiaries
- Collect samples
- Apply hygiene measures (in particular treatment of colonies and disinfection/destruction of equipment)

# A. Terrestrial Animal Health Code, 2010

## Chapter 4.14. - Art. 4.14.3.: Conditions for approval of breeding apiaries for export trade

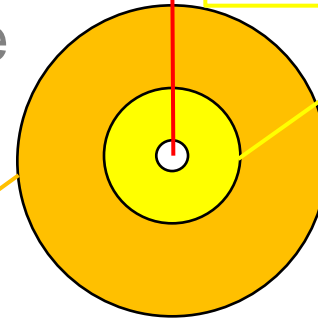
- **Apiaries** must be situated in the centre of an area defined as follows:

No case of varroosis reported – past 2 years

50 km

5 km

No case of other bee diseases (OIE TC) reported – past 8 months



- **Bee-keepers** must notify immediately to the Veterinary Authority any suspicion of a contagious disease – apply biosecurity measures – collect every 10 days different type of samples during breeding and despatch period to be sent to official laboratory

# A. Terrestrial Animal Health Code, 2010

## Chapter 4.14. - Art. 4.14.4.: Conditions for sanitation and disinfection of apiculture equipment

**Veterinary authorities of exporting countries** are requested to regulate the use of products and means for sanitation and disinfection of apicultural equipment in their own country.

- In the establishment recognised as affected with a contagious disease of bees;
- With safe and effective products adapted to the diseases and equipment concerned (destruction by burning for some diseases and for equipment in bad condition);
- With products stored and waste water kept away from the bees and disposed in a sewer or in an unused well.

# A. Terrestrial Animal Health Code, 2010

## Chapter 4.14. - Art. 4.14.5.: Preparation of the international veterinary certificate for export

- The certificate covers hives containing bees, swarms, consignments of bees, queen bees, brood combs, royal cells, etc.
- The document must be prepared in accordance with the model contained in chapter 5.10.



# A. Terrestrial Animal Health Code, 2010

Chapters relevant for the honey bees in the *Terrestrial Code*:

- Chapter 4.14., Hygiene and disease security procedures in apiaries
- **Chapter 5.10., Model Veterinary Certificates for International Trade**
- Chapters 9.1. to 9.6. covering the six honey bee diseases included in the OIE List

# A. Terrestrial Animal Health Code, 2010

Document No. 1025, adopted by the World Health Organization on 15 June 2010, under the terms of the International Health Regulations (2005)

## Article 5.10.4.

### Model Veterinary Certificate for International Trade in Products of Animal Origin

#### COUNTRY :

Part II: Details of dispatched consignment	I.1. Consignor: Name:		I.2. Certificate reference number:		
	Address:		I.3. Veterinary Authority:		
	I.4. Consignee: Name:				
	Address:				
	I.5. Country of origin:		ISO code*	I.6. Zone or compartment of origin**:	
	I.7. Country of destination:		ISO code*	I.8. Zone or compartment of destination**:	
	I.9. Place of origin: Name:				
	Address:				
	I.10. Place of shipment:		I.11. Date of departure:		
	I.12. Means of transport:		I.13. Expected border post:		
	Aeroplane <input type="checkbox"/> Ship <input type="checkbox"/> Railway wagon <input type="checkbox"/> Road vehicle <input type="checkbox"/> Other <input type="checkbox"/>		I.14. CITES permit No(s):**:		
	Identification:				
	I.15. Description of commodity:		I.16. Commodity code (ISO code):		
			I.17. Total quantity:		
I.18. Temperature of product:		I.19. Total number of packages:			
Ambient <input type="checkbox"/> Chilled <input type="checkbox"/> Frozen <input type="checkbox"/>		I.20. Identification of container/seal number:			
I.20. Identification of container/seal number:		I.21. Type of packaging:			
I.22. Commodities intended for use as:					
Human consumption <input type="checkbox"/>		Animal feed <input type="checkbox"/>			
Further processing <input type="checkbox"/>		Technical use <input type="checkbox"/>			
Other <input type="checkbox"/>					
I.23.					
I.24. Identification of commodities:					
Species (Scientific name)		Nature of commodity	Treatment type		
		Approval number of establishments			
Number of packages		Net weight	Lot ID/date code		

\* Optional and \*\* if referenced in Part II.

**Article 5.10.4.** for the Model of Veterinary Certificate for International Trade in Products of Honey Bees origin (Honey, Royal Jelly, Propolis, Venom, etc)

# A. Terrestrial Animal Health Code, 2010

Chapter 5.10. — Model Veterinary Certificate for International Trade in Live Animals, hatching eggs and products of animal origin

Article 5.10.5.

## Model Veterinary Certificate for International Trade in Bees and Brood Combs

### COUNTRY :

Part I: Details of dispatched consignment	I.1. Consignor: Name:		I.2. Certificate reference number:		
	Address:		I.3. Veterinary Authority:		
	I.4. Consignee: Name:				
	Address:				
	I.5. Country of origin:		ISO code*	I.6. Zone or compartment of origin**:	
	I.7. Country of destination:		ISO code*	I.8. Zone or compartment of destination**:	
	I.9. Place of origin: Name:				
	Address:				
	I.10. Place of shipment:		I.11. Date of departure:		
	I.12. Means of transport:		I.13. Expected border post:		
	Aeroplane <input type="checkbox"/> Ship <input type="checkbox"/> Railway wagon <input type="checkbox"/>		I.14. CITES permit No(s)**:		
	Road vehicle <input type="checkbox"/> Other <input type="checkbox"/>				
	Identification:				
	I.15. Description of commodity:		I.16. Commodity code (HS code):		
		I.17. Total quantity:			
I.18.		I.19. Total number of packages:			
I.20. Identification of container/seal number:		I.21.			
I.22. Commodities intended for use as:					
Breeding/rearing <input type="checkbox"/>		Other <input type="checkbox"/>			
I.23.					
I.24. Identification of commodities:					
Category		Breed* / Variety*			
Quantity		Identification details			

\* Optional and \*\* If referenced in Part III.

**Article 5.10.5.** for the Model of Veterinary Certificate for International Trade in Bees and Brood Combs

# A. Terrestrial Animal Health Code, 2010

Chapters relevant for the honey bees in the *Terrestrial Code*:

- Chapter 4.14., Hygiene and disease security procedures in apiaries
- Chapter 5.10., Model Veterinary Certificates for International Trade ..., art. 5.10.5.
- **Chapters 9.1. to 9.6. covering the six honey bee diseases included in the OIE List**

# A. Terrestrial Animal Health Code, 2010

**Chapters 9.1. to 9.6. covering the six diseases listed by the OIE – Outline of their content:**

Art. 1. General Provision

Art. 2. Trade in commodities

Art. 3. Determination of the disease status of a country or zone/compartment (under study)

Art. 4. Country or zone/compartment (under study) free from the disease

Art. 5-6-7-etc. Recommendations for importation of honey bees, h.b. products & equipments associated with beekeeping.

# A. Terrestrial Animal Health Code, 2010

Chapters 9.1. to 9.6. covering the six diseases listed by the OIE:

## 1. General Provision:

This article provide information such as:

- Agent(s) responsible of the disease;
- Species of bees concerned (for most of these chapters are concerned the honey bee *Apis mellifera* and other *Apis* spp. – exception Chap. 9.4. on Small Hive Beetle Infestation: Bumble bee *Bombus terrestris* is also concerned),
- When relevant, a brief summary of the epidemiology of the disease,
- When relevant, the incubation period that should be considered for the purpose of this publication (impact on the quarantine period)

# A. Terrestrial Animal Health Code, 2010

Chapters 9.1. to 9.6. covering the six diseases listed by the OIE:

## 2. Trade in commodities:

In this article are detailed the commodities safe for international trade.

Examples:

**American Foulbrood:** honey bee semen and venom are safe;

**Varroosis:** honey bee semen, eggs and venom, and extracted honey and beeswax (not in the form of honeycomb) are safe.

# A. Terrestrial Animal Health Code, 2010

Chapters 9.1. to 9.6. covering the six diseases listed by the OIE:

## 3. Determination of the disease status of a country or zone/*compartment* (under study):

In this article are described the criteria to determine the disease status of a country (for most of the bee disease chapter they are the same):

- Risk assessment conducted for the disease
- Notifiable disease in the whole country or *zone/compartment* (under study)
- On-going awareness programme in place for the disease
- Knowledge of and authority over all domesticated apiaries of the Veterinary Authority in the country



# A. Terrestrial Animal Health Code, 2010

Chapters 9.1. to 9.6. covering the six diseases listed by the OIE:

4. *Country or zone/compartiment (under study) free from the disease:*

In this article are described:

- Which type of free status the Country can claim for (Historically or resulting from an eradication program), and
- The conditions to meet in each case.

# A. Terrestrial Animal Health Code, 2010

Chapters 9.1. to 9.6. covering the six diseases listed by the OIE:

5-6-7-etc. Recommendations for the importation of live honey bees, honey bee products and equipment associated with beekeeping:

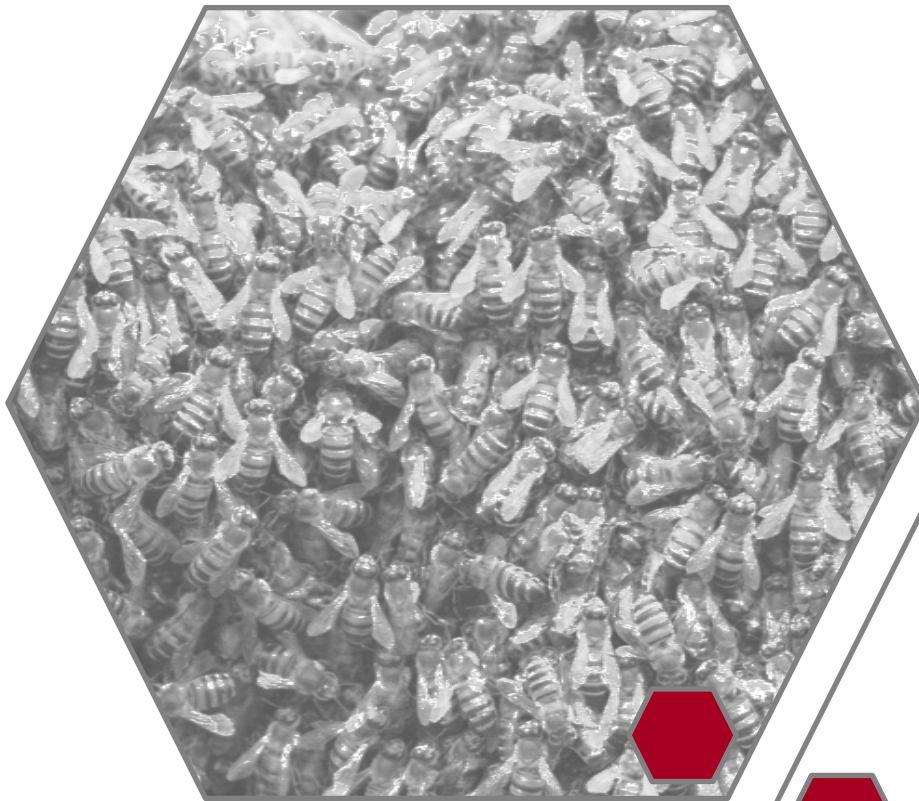
In these articles are described what the Veterinary authorities of the importing country need to require from the exporting country based on the nature of the imported commodities and for the diseases in question.

# OIE *ad hoc* Group on Bee Diseases

- Group of 6 experts – Met in January 2010 a first time
- Will meet a second time in July 2011

The Terms of Reference for this second meeting will mainly focus on:

Review and address OIE Members' comments received following the update of the chapters of the *Terrestrial Code* related to honey bees



***Manual of  
Diagnostic Tests  
and Vaccines for  
Terrestrial Animals***

—

**Relevant parts for  
honey bees**

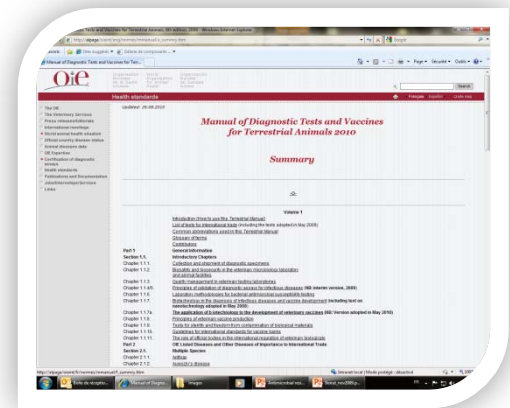
# B. Terrestrial Manual, 2010

## Aim:

to provide internationally agreed diagnostic laboratory methods and, when relevant, requirements for the production and control of vaccines and other biological products

- 2 volumes
- 11 Generic chapters on general issues
- 113 Diseases specific chapters

➤ Is the companion volume to the *Terrestrial Animal Health Code*



## B. Terrestrial Manual, 2010

- First published in 1989 and since then every 4 years in paper version.
- The last paper version is the 2008 edition.
- It is also available on the OIE website where, in addition, the chapters updated annually after adoption by the World Assembly of Delegates during the General Session are also available:

<http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/>

# B. Terrestrial Manual, 2010

- Disease-specific chapter for the six honey bees diseases listed by the OIE
- + An Introductory note on bee diseases
- + One chapter on Nosemosis of honey bees

# B. Terrestrial Manual, 2010

## Disease-specific chapters related to the diseases of honey bees – outline of their content

Developped following this template:

- Summary
- A. Introduction
- B. Diagnostic techniques
- C. Requirements for vaccines and diagnostic biologicals
- References



# B. Terrestrial Manual, 2010

## Disease-specific chapters related to the diseases of honey bees

### Summary

It is intended to provide information for veterinary officials and other readers who need a general overview of the tests and vaccines available for the disease.

### A. Introduction

Part A gives a general introduction to the disease

# B. Terrestrial Manual, 2010

## Disease-specific chapters related to the diseases of honey bees

### B. Diagnostic techniques

Part B deals with laboratory diagnosis of the disease.

### C. Requirements for vaccines and diagnostic biologicals

Part C (where appropriate) deals with the requirements for vaccines or in vivo diagnostic biologicals.

Except one exception, no biological products available for bee disease-specific chapters

# B. Terrestrial Manual, 2010

## Disease-specific chapters related to the diseases of honey bees

### References

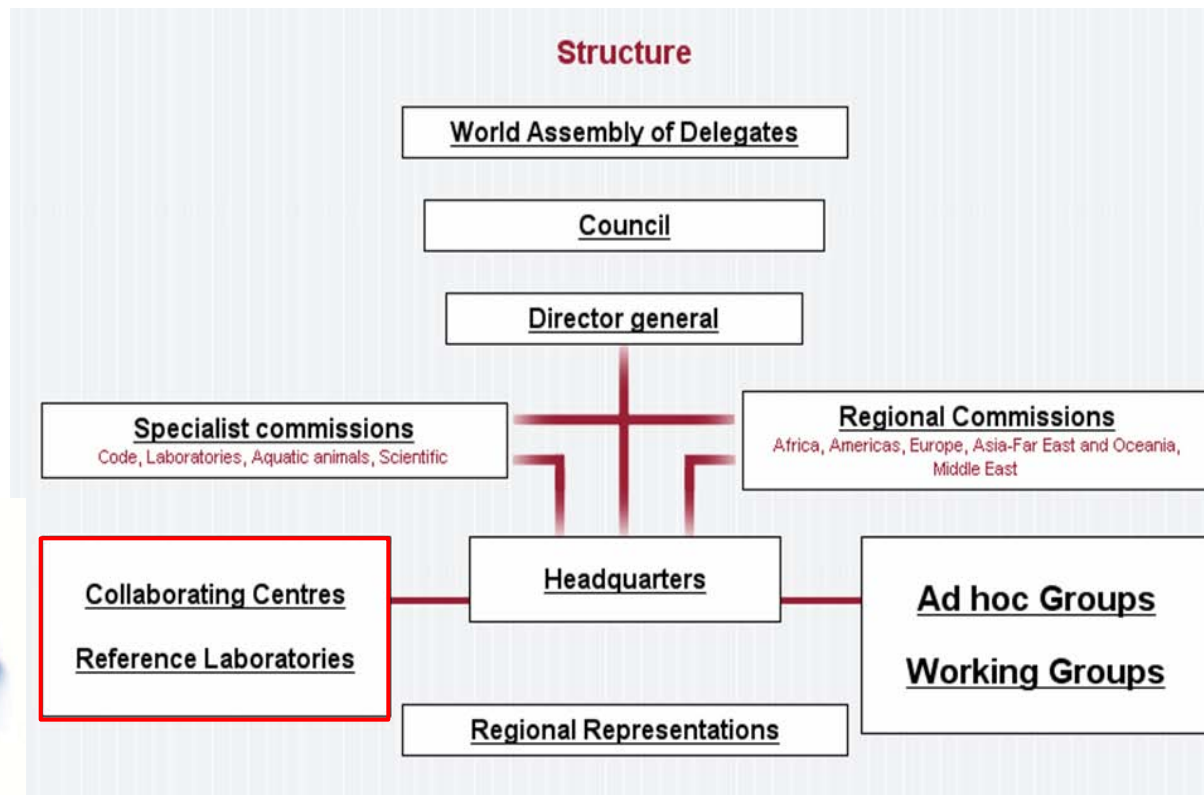
This part provides references (articles from scientific journals, official reports publications, etc) for further information.

In the specific chapters on bee diseases, there is also for some of them information on the collection, selection and shipment of samples, and information on the treatment(s) which can be applied.

**OTHER OIE TOOLS  
RELEVANT FOR  
DISEASES OF HONEY  
BEES**

# Other OIE tools

## 1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres



# Other OIE tools

## 1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres

- Crucial role for OIE and its Members
- Worldwide expertise
- Essential role in prevention, detection and control of animal diseases
- Supports OIE in the establishment of standards
- Strengthens OIE capability to respond to the new challenges

 international solidarity

# Other OIE tools

## 1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres

	Reference Laboratories	Collaborating Centres	Total
Number	225	40	<b>265</b>
Countries	37	21	<b>42*</b>
Diseases or Topics	111	38	<b>149</b>
Experts	166	40	<b>206</b>

# Other OIE tools

## 1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres

- Bee diseases

- ✓ **Mr Jean-Paul Faucon**

ANSES Sophia Antipolis

FRANCE

Email: [jp.faucon@afssa.fr](mailto:jp.faucon@afssa.fr)

- ✓ **Dr Wolfgang Ritter**

Chemisches und Veterinäruntersuchungsamt Freiburg

GERMANY

Email: [wolfgang.ritter@cvuafr.bwl.de](mailto:wolfgang.ritter@cvuafr.bwl.de)



# Other OIE tools

## 1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres

- American foulbrood of honey bees
- ✓ **Dr Adriana M. Alippi**  
Centro de Investigaciones en Fitopatología  
ARGENTINA  
Email: [alippi@biol.unlp.edu.ar](mailto:alippi@biol.unlp.edu.ar)

# Other OIE tools

1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres
2. Training - OIE Laboratory Twinning

**Concept:** Sustainable enhancement of capacity and expertise by supporting a link between an OIE Reference Laboratory or Collaborating Centre (parent) and a national laboratory (candidate) from a developing or in-transition country.

# Other OIE tools

1. Expertise - The OIE Network of Reference Laboratories and Collaborating Centres
2. Training - OIE Laboratory Twinning
- 3. Publication**

OIE Technical Series n 12 in preparation on:  
The vet and the bee

Expected second semester of 2012

# OIE 5th Strategic Plan 2011/2015

- Strategic Plan adopted in **May 2010** by the World Assembly of Delegates
- In this plan, it is mentioned that “OIE will concentrate on actions that support food security through the reduction of disease in food producing animals **and in bees, the common pollinators of food crops**”.

# OIE Press Release: Health problems of bees are due to multiple factors – 28 April 2010

Dr B. Vallat's quote, OIE Director General:

*“That is why the OIE considers bees' mortality and bee diseases to be a priority in its Strategic Plan 2011- 2015.”*

(...)

*“The OIE will propose to the international community to intensify the research on the causes of the mortality of bees and to better control and fight against the numerous emerging and already known diseases on the basis of the standards and guidelines adopted by the organisation, including in the field of biosecurity of global and regional trade of bees between countries, which is a major cause of global contaminations”*

<http://www.oie.int/en/for-the-media/press-releases/detail/article/health-problems-of-bees-are-due-to-multiple-factors>

# Thank you for your attention



Organisation mondiale  
de la santé animale

World Organisation  
for Animal Health

Organización Mundial  
de Sanidad Animal