WOAH Reference Laboratory Reports Activities

2022

Activities in 2022

This report has been submitted: 9 mars 2023 15:02

Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Infestation of honey bees with Aethina tumida (small hive beetle) |
| Address of laboratory: | Les Templiers 105 route des Chappes CS 20111 06902 Sophia Antipolis FRANCE |
| Tel.: | +33492943700 |
| E-mail address: | stephanie.franco@anses.fr |
| Website: | https://www.anses.fr/fr |

Name (including Title of Head of Laboratory (Responsible Official)): Richard Thiéry (Head of the Anses Sophia Antipolis Laboratory)

Name (including Title and Position) of WOAH Reference Expert: Stéphanie Franco (Head of the National Reference Laboratory for Bee Health in France, Scientist in charge of macro and microscopic diagnostics at the Anses laboratory Anses - Sophia Antipolis)

Which of the following defines your laboratory? Check all that apply: Governmental Research agency

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td>Nationally</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td>Nationally</td>
</tr>
<tr>
<td>Identification of Aethina tumida by morphological examination</td>
<td>YES</td>
<td>40</td>
</tr>
</tbody>
</table>

WOAH Reference Laboratory Reports Activities 2022
Identification of Aethina tumida by PCR | YES | 8 | 0
Identification of Aethina tumida by sequencing | NO | 6 | 0

**TOR2: REFERENCE MATERIAL**

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?
   No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?
   Yes

<table>
<thead>
<tr>
<th>TYPE OF REAGENT AVAILABLE</th>
<th>RELATED DIAGNOSTIC TEST</th>
<th>PRODUCED/ PROVIDE</th>
<th>AMOUNT SUPPLIED NATIONALLY (ML, MG)</th>
<th>AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)</th>
<th>NO. OF RECIPIENT WOAH MEMBER COUNTRIES</th>
<th>COUNTRY OF RECIPIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult and larval specimens of Aethina tumida</td>
<td>Morphological identification</td>
<td>Provided by the FERA (UK)</td>
<td>0</td>
<td>4 specimens</td>
<td>1</td>
<td>Europe</td>
</tr>
</tbody>
</table>

4. Did your laboratory produce vaccines?
   Not applicable

5. Did your laboratory supply vaccines to WOAH Members?
   Not applicable

**TOR3: NEW PROCEDURES**

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?
   No

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?
   No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?
   No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?
   No

**TOR4: DIAGNOSTIC TESTING FACILITIES**

10. Did your laboratory carry out diagnostic testing for other WOAH Members?
    No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?
    Yes

<table>
<thead>
<tr>
<th>NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY</th>
<th>PURPOSE</th>
<th>HOW THE ADVICE WAS PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scientific and technical expertise</td>
<td></td>
</tr>
</tbody>
</table>
FRANCE on the diagnosis, surveillance and control of the Small Hive Beetle, following its detection on the French island of La Réunion in 2022

Meetings Emails Scientific reports (3) Online training sessions (4)

**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?  
No

**TOR6: EPIZOOLOGICAL DATA**

14. Did your Laboratory collect epidemiological data relevant to international disease control?  
No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?  
Yes

**IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:**

Following the detection of A. tumida in the French Island of La Réunion in 2022, a surveillance program was set up by the French veterinary authorities. The data on the epidemiological situation in La Réunion was analysed and disseminated through a scientific report produced by our laboratory.

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

b) International conferences:

1  

c) National conferences:

4  
Duquesne, V. and Franco, S. Online training for field staff in charge of apiary health inspections in the French island of La Réunion. "The small hive beetle: Biology, risks of spread and establishment; Detection, sampling and analysis."(01/08/2022 ; 11/08/2022 ; 14/09/2022 ; 05/10/2022)

d) Other (Provide website address or link to appropriate information):
The laboratory publishes information on the epidemiological situation of A. tumida at European level: https://sitesv2.anses.fr/en/minisite/abeilles/liste-actualites/news
And at national level: https://www.plateforme-esa.fr
The laboratory contributes to a weekly international animal health surveillance bulletin.
Web articles specifically dedicated to the situation of A. tumida in La Réunion were also published online on this website.
In 2022, 3 scientific and technical reports were also produced by the Anses to provide expertise to the situation in La Réunion:

**TOR7: SCIENTIFIC AND TECHNICAL TRAINING**

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?
   
   Yes
   
   a) Technical visit: 1
   
   b) Seminars: 0
   
   c) Hands-on training courses: 0
   
   d) Internships (>1 month): 0

   | Type of technical training provided (a, b, c or d) | Country of origin of the expert(s) provided with training | No. participants from the corresponding country |
---|---|---|
| 1 | Denmark | 2 |

**TOR8: QUALITY ASSURANCE**

18. Does your laboratory have a Quality Management System?
   
   Yes

   Quality management system adopted | Certificate scan (PDF, JPG, PNG format) |
---|---|

19. Is your quality management system accredited?
   
   Yes

   | Test for which your laboratory is accredited | Accreditation body |
---|---|
| Identification of Aethina tumida by morphological examination | COFRAC |
| Identification of Aethina tumida by real time PCR | COFRAC |

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?
   
   Yes
   
   The biological risk is low for Aethina tumida, as the samples to be analysed arrive dead at the laboratory. If they arrive alive, specific procedures are implemented (opening the package in a confined environment, deep-freezing the samples to kill the specimens).

**TOR9: SCIENTIFIC MEETINGS**
21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?
No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?
No

**TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES**

23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?
Yes

24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?
No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?
No

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?
No

**TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING**

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?
No

**TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOAH?
No

29. Additional comments regarding your report:
Yes

The Anses laboratory in Sophia Antipolis has been working for several years to develop and validate quality diagnostic methods for the detection and identification of Aethina tumida. These methods have been disseminated to WOAH Member States, through the Manual of Diagnostic Tests and Vaccines, making them autonomous in their use. The laboratory thus remains in little demand in terms of diagnosis and expertise at the international level. More generally, the complexity of administrative procedures and the costs of sending samples internationally are often an obstacle to the implementation of reference activities. Difficulties in sourcing samples also remain an issue for the organisation of reference activities (e.g. ILPT, dissemination of reference material).