

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Varroosis of of honey bees
*Address of laboratory:	66 Ward Street, Upper Hutt 5018, NEW ZEALAND
*Tel:	+6448945600
*E-mail address:	Richard.Hall@mpi.govt.nz
Website:	https://www.mpi.govt.nz/science/laboratories/national-animal-health-laboratory/
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr Anastasia Chernyavtseva
*Name (including Title and Position) of WOA Reference Expert:	Dr Richard Hall, Principal Scientist
*Which of the following defines your laboratory? Check all that apply:	Governmental

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

Diagnostic Test	Indicated in WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Direct diagnostic tests			
Morphological identification	Yes	1	0
Debris examination	Yes	743	0
Alcohol-wash test	Yes	2	0
Capped brood examination	Yes	2	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?

No

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

No

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA Members?

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 WOAHS Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

9. Did your laboratory validate vaccines according to WOAHS Standards for the designated pathogen or disease?

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAHS Members?

No

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

Yes

Name of the WOAHS Member Country receiving a technical consultancy	Purpose	How the advice was provided
AUSTRALIA	Assisting with connections to expertise on varroa sensitive hygiene in <i>Apis mellifera</i> , and queen breeding.	Email
FIJI	Assisting with advice about varroa resistance in <i>Apis mellifera</i>	Email
NEW CALEDONIA	Assisting with written materials and photograph for bee health guide to recognise pest and diseases	Email
TONGA (KINGDOM OF)	Technical information	Email
NEW ZEALAND	Beekeeper extension materials for recognising bee pests and diseases	Email, and online materials

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAHS Members other than the own?

No

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAHS?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:

As part of the international COLOSS network (<https://coloss.org/>), we run an annual survey of all beekeepers in New Zealand to determine causes of colony loss; including the collection of epidemiological data as to the impact of varroa on honey bee colonies, including: number of colonies with losses attributed to varroa, attributed reasons for varroa losses (e.g. reinvasion, treatment failure), and assessment of the effectiveness of varroa treatment methods. Results from the New Zealand colony loss survey are made available here: <https://www.mpi.govt.nz/biosecurity/how-to-find-report-and-prevent-pests-and-diseases/bee-biosecurity/bee-colony-loss-survey/>

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:

We published an annual report on national honey bee colony loss data for New Zealand, including honey bee colony losses that have been attributed to varroa.

The report of colony losses experienced in 2024, was published in 2025 and is available in the following weblink. The 2025 colony losses caused by varroa will be published in 2026. <https://www.mpi.govt.nz/biosecurity/how-to-find-report-and-prevent-pests-and-diseases/bee-biosecurity/bee-colony-loss-survey/> We also publish a quarterly journal (Surveillance) that is open-access, which documents our biosecurity investigations and epidemiological activities, including reports on honey bee health, and the effects of varroa mite. <https://www.mpi.govt.nz/biosecurity/exotic-pests-and-diseases-in-new-zealand/surveillance-programmes/surveillance-biosecuritymagazine/>

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:

1

Roberts, J.M.K., Hall, R.J., Shams, F., Encinas-Viso, F., Bravo, F., Soroka, J., Milla, L., Snape, N., Martoni, F., Walford, A., Gleeson, D. and Trujillo-González, A. (2025), *Environmental DNA Methods for Detection of Varroa destructor in Honey Bee (Apis mellifera) Hives*. *Environmental DNA*, 7: e70109. <https://doi.org/10.1002/edn3.70109>

b) International conferences:

1

34th Conference of the Regional Commission for Asia and the Pacific, 23 September 2025, poster presentation: 'Honey bee WOA Reference Laboratories in New Zealand, for American foulbrood and Varroa Mite'

c) National conferences:

0

d) Other (Provide website address or link to appropriate information):

2

<https://www.mpi.govt.nz/biosecurity/how-to-find-report-and-prevent-pests-and-diseases/bee-biosecurity/bee-pests-and-diseases/>

Hall R, Pragert H, Wallingford N (2025) History of honey bee importations into New Zealand. *Surveillance* 52(1):5–10.

<https://www.sciquest.org.nz/browse/publications/article/175320>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA Members?

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories	PDF	Certificate of Accreditation AHL 2025.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
ISO/IEC 17025 General requirements for the competence of testing and	

Richard J. Hall - -

calibration laboratories

<https://www.ianz.govt.nz/>

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

Our laboratory has permission under Section 52 and 53 of the Biosecurity Act 1993 (New Zealand) to communicate, and propagate unwanted organisms. *Varroa* spp. are officially listed as unwanted organisms in New Zealand, and our processes and procedures for handling varroa are in adherence with the s52/53 permission. Our laboratory operates under, and is audited to the Australia/New Zealand Standard AS/NZS 2243.3:2002 Safety in Laboratories. Part 3: Microbiological Aspects and Containment Facilities. We have an organisational Biological Safety Committee which conducts standardised risk assessment reviews for our laboratory work.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAHP?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAHP?

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
34th Conference of the Regional Commission for Asia and the Pacific	2024-09-22	Jakarta	Poster	Honey bee WOAHP Reference Laboratories in New Zealand, for American foulbrood and <i>Varroa</i> Mite

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
Varroosis (infestation of honey bees with <i>Varroa</i> spp.)	Participant	3	WOAHP Reference Laboratories for Varroosis at: ANSES (French Agency for Food, Environmental and Occupational Health & Safety) ALSO, National Reference Laboratory for Bee Diseases, Friedrich-Loeffler-Institut, Germany.

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen during the past 2 years?

No

We participated in an interlaboratory proficiency test conducted by a non-WOAHP laboratory.

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAHP Member Countries
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Morphological identification of varroa mites	Participant	2	Morphological identification of varroa mites according to Chapter 3.2.6 of the WOAHA Manual of Diagnostic Tests and Vaccines for Terrestrial Animals	NEW ZEALAND,
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TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHA?

Yes

Kind of consultancy	Location	Subject (facultative)
Technical advice	WOAHA. Paris, France	Advice on how satellite imagery could help honey bee health

29. Additional comments regarding your report:

Yes

Debris examination in Question 1 is conducted as part of a broader surveillance programme, and the technique has the capacity to detect other bee pests.