



EPPO-Q-bank

A database to support plant pest diagnostic activities

Increased risk of plant pathogenic quarantine pests and diseases, due to globalization and climate change, enhances the need for up-to-date knowledge and validated identification and detection methodologies. DNA barcoding is increasingly used as a diagnostic tool in phytosanitary laboratories. This method uses sequence data of short standardised genetic DNA markers to aid species identification.

EPPO-Q-bank database provides a wide range of information about specimens, isolates, strains or populations of quarantine species or their look-alikes and supports plant pest diagnostics using DNA barcoding by sharing curated sequence data. The data is curated by an international network of experts.



MISSION

The objective of EPPO-Q-bank is to support diagnostic activities of phytosanitary organizations: National Plant Protection Organizations, general inspection bodies, and private laboratories. A database with reliable sequences generated from vouchered biological material is an indispensable tool to identify and detect harmful quarantine organisms.

CONTENT

EPPO-Q-bank is an open-access database comprising

- Genomic sequence data of properly documented specimens, isolates, strains or populations of quarantine species or their look-alikes.
- For most of the specimens, isolates, strains or populations, links to collections from which items may be obtained for further studies, or for use as controls in identification and detection tests.
- Barcoding protocols published in EPPO Diagnostic Protocols or being identified as useful protocols by our curators.
- Tools to perform quick analyses of barcoding sequences, including single or multilocus blast and tree views.
- Links to other relevant databases, e.g. EPPO Global database.

Information is provided per discipline (arthropods, bacteria, fungi, nematodes, phytoplasmas, viruses & viroids, and invasive plants).

BENEFICIARIES

National Plant Protection Organizations and stakeholders in the statutory plant health domain, including:

- National Reference Laboratory and National Inspection Services
- Diagnostic laboratories, R&D organizations in plant health
- Agricultural production and trade

HISTORY

This database originally started as part of a Dutch project to strengthen the plant health infrastructure (Q-bank). Q-bank was launched in 2010 and further developed in the framework of the EU funded project QBOL. The Dutch Ministry of Economic Affairs financed this project from 2011 to 2018. In September 2018, the EPPO Council agreed that the database should be transferred to EPPO. Data from the original Q-bank database was transferred to the EPPO-Q-bank database which was launched in May 2019. During 2019 and 2020, further work was conducted to harmonize the content and structure of the data among disciplines.

ORGANISATION

The entries in EPPO-Q-bank are updated by seven teams of curators with taxonomic, phytosanitary and diagnostic expertise from National Plant Protection Organizations and institutes with connections to relevant phytosanitary collections.

The curators work under the supervision of the EPPO Panel on Diagnostics and Quality Assurance and specialized EPPO Diagnostics Panels.

The EPPO Secretariat is in charge of the coordination of the work and of the development and maintenance of the database.

Curators of the insect database



Dr. T. Bukovinszki
NRC-
NPPO (NL)

J.-C. Streito
INRAE
(FR)

É. Pierre
INRAE
(FR)

Curators of the plant database



Dr. H. Duistermaat
Naturalis Biodiv.
Center (NL)

Dr. J. van Valkenburg
NRC-
NPPO (NL)

F. Verloove
Meise Bota-
nic Garden
(BE)

Curators of the fungi database



Dr. U. Damm
Senckenberg
Mus. of Natural
History (DE)

Ir. M. van Raak
NRC-
NPPO (NL)

Curators of the nematode database



Ir. E. van Heese
NRC-
NPPO (NL)

Dr. S. Kiewnick
JKI
(DE)

Curators of the phytoplasma database



Dr. M. Nicolaisen
U. Aarhus
(DK)

Prof. Dr. A. Bertaccini
U. Bologna
(IT)

Dr. N. Contaldo
U. Bologna
(IT)

Curators of the bacteria database



Dr. M. Bergsma-Vlami
NRC-
NPPO (NL)

J. van de Bilt
NRC-
NPPO (NL)

Dr. B. Cottyn
ILVO
(BE)

Prof. Dr. P. de Vos
LM-U Gent
(BE)

Curators of the virus database



Dr. ir. R. van der Vlugt
PRI
(NL)

Dr. A. Roenhorst
NRC-
NPPO (NL)

Dr. S. Winter
DSMZ
(DE)

Dr. W. Menzel
DSMZ
(DE)

We count on you to improve and enrich the database

If you have data to contribute, **please contact us**: <https://qbank.eppo.int/contact>