FUNGI

Q-bank

COMPREHENSIVE DATABASES ON QUARANTINE PLANT PESTS AND DISEASES

SCAN QR-CODE OR VISIT
WWW.Q-BANK.EU/FUNGI

INTRODUCTION

Q-bank is a dynamic open-access database located at www.q-bank.eu. It contains data that is relevant to supporting national and international plant health policies

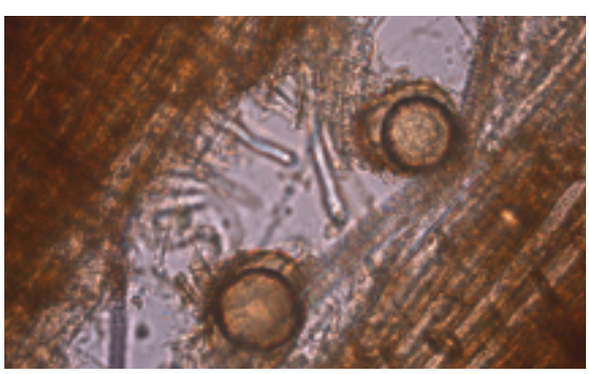
Q-bank offers sequence data, morphological data (including photographs) and nomenclatural and diagnostic data on plant pathogenic quarantine organisms and look-alikes. The data is curated by an international network of experts, with specimens available from publicly accessible reference collections.

Q-bank offers information about arthropods, bacteria, fungi, invasive plants, nematodes, phytoplasmas and viruses. It provides plant protection organisations, inspection bodies and private laboratories with the information they need for timely and accurate identification of quarantine organisms.

ORGANISMS INCLUDED

The Q-bank Fungi database contains curated DNA sequence data (barcodes), morphological, phenotypical and ecological data for approximately 600 species that are relevant to mycological phytopathology. Thirty-two species and their closest relatives are included which are currently important in relation to quarantine issues in Europe.

Currently, the database contains curated sequence data for members of the fungal genera *Phoma* and associated genera, *Colletotrichum, Ceratocystis, Melampsora, Monilinia, Mycosphaerella* and its anamorphs, *Puccinia, Stenocarpella, Thecaphora, Verticillium*, and the Oomycete genus *Phytophthora*. Morphological data is supplied for *Phytophthora* and selected species of *Colletotrichum* and *Phoma*(-like) genera.



Oospores of Phytophthora fragariae in strawberry root

One of the main aims of the Q-bank Fungi database is to further xpand the list of genera included in order to cover as many of the regulated fungi as possible.

METHODOLOGY

The Q-bank Fungi database only contains data of properly documented strains that in almost all cases are linked to public or personal culture-collections, and where possible include those strains known to be ex-type material or reference strains. In addition to sequence data, morphological features are included for *Phoma* and associated genera, *Colletotrichum* and the Oomycete genus *Phytophthora*. This helps further secure the proper identification of your material.

Stem base rot on cypress caused by Phytophthora lateralis

Bleeding canker on beech caused by Phytophthora ramorum

Well-described molecular decision schemes including detailed protocols are provided on the website, hyperlinked to associated publications where applicable.

GENERAL SEARCH

It is possible to search the fungal database on both species and strain records. The minimum search parameters supplied at species level include searching on any text field, fungal species name, whether it has a quarantine status in the EU and the substrate and/or country of the included strains. The minimum search parameters supplied at strain level include searching on any text field, fungal species name, strain or other collection number, whether it has a quarantine status in the EU and on substrate and/or country.
Within the website, it is possible to add additional search criteria through the 'Add condition' menu item.

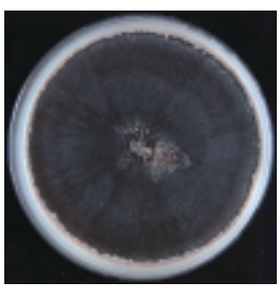
IDENTIFICATION

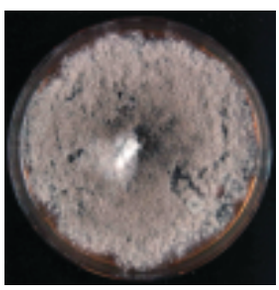
A fungal strain can be identified by single and preferably multi locus sequence analyses. Moreover, for *Colletotrichum*, *Phoma* and *Phytophthora*, polyphasic analyses increase the confidence in the determined identity.

For the species that are included in the EPPO and EU Council Directive, a molecular decision scheme shows which can be identified by ITS sequence alone and which species require a specific additional locus for positive identification.

Hyperlinks to the protocols are provided on the decision scheme. The whole document can be downloaded as a PDF.

Multi locus sequence identifications can be performed at either species or strain level to address the needs of different users. These identifications can be performed against all included fungal records or using identification scenarios tailor-made in terms of the loci included in the database for specific genera.





Culture of Boeremia exigua var. exigua grown for 14 days on two different culture media (malt extract agar left and oatmeal agar right)

Conidia of Colletotrichum fioriniae

Conidioma of Colletotrichum novae-zelandiae

Netherlands Food and Consumer Product Safety Authority
Ministry of Economic Affairs

CBS

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