

**EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES**

Web version

Summary and main recommendations of the 2nd EPPO Workshop for heads of laboratories

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Accreditation what are the needs of laboratories?

Accredited laboratories commented that accreditation was very beneficial but is resource intensive and has a significant cost in particular at the start of the process. Consequently, several ways of reinforcing regional collaboration were explored to try to reduce these limitations. It was noted that accreditation of laboratories according to ISO 17025 was a requirement in many countries for a laboratory to be designated as a National Reference Laboratory.

Validation data

Validation data is very important and laboratories should share the validation data generated when validating tests. It was noted that the EPPO database on Diagnostic expertise includes a section ‘validation data for diagnostic tests’ and that data should be deposited in this database. The content of this section of the database should be reviewed to see if additional data is required. In addition it was suggested that several examples of completed validation summary sheets considered to provide all the information needed, should be given.

Laboratories should make contact with commercial providers to obtain validation data.

It was also suggested that laboratories could share their plans for validation of tests to avoid duplication. Participants suggested that this should be achieved by the creation of an information sharing platform.

Training needs on accreditation

The participants recommended that a Workshop on accreditation should be organized as soon as possible because an increasing number of laboratories are initiating an accreditation process and require guidance. In addition issues such as flexible scope need further discussions and exchanges of experiences.

Flexible scope

The Workshop noted that the possibility of accreditation with a flexible scope was not available in every country. It recommended that EPPO should develop guidelines to define criteria on how to progress from a fixed scope to a flexible scope to harmonize the approach in the region. Consultation with the European co-operation for Accreditation (EA) for the development of these guidelines would be valuable.

Relationships with accreditation bodies

The Workshop noted that within Accreditation bodies there is a variable level of knowledge concerning plant health diagnostic activities. It recommended that the EPPO Secretariat should strengthen its existing collaboration with EA and other regional accreditation bodies in order to continue to increase awareness of plant health specificities. In parallel laboratories should establish regular contact with their national accreditation bodies.

Other issues raised

The validation of morphological identification is also still considered as problematic. New guidance will be provided in the revision of PM 7/98 *Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity*. The EPPO Secretariat hopes that this will clarify the requirements.

Access to reference material was also mentioned as a critical issue (see also below).

It was noted that measurement of uncertainty was still problematic and that further work may be carried out in EPPO on this issue.

Participation in proficiency tests was noted as important for accreditation but their number is still limited. Proficiency testing programmes relevant for the scope of accreditation are not always available.

Collaboration between laboratories from different countries should be encouraged (such as the Nordic Baltic laboratory network).

Sampling was noted as a critical issue. It was noted that much effort has been invested into development and validation of tests but that the sampling methodology to ensure that the sample is appropriate is also critical.

Organization of proficiency testing (PT) and test performance studies (TPS): what are the challenges?

The Workshop highlighted that organizing PT and TPS was essential in particular in the framework of accreditation but highlighted that the main constraints were cost and time. Several ways of reinforcing regional collaboration were explored to try to reduce these limitations.

EPPO draft Standard on Guidelines for the organization of interlaboratory comparisons by plant pest diagnostic laboratories

The Workshop welcomed the preparation of an EPPO Standard providing guidance on how to organize interlaboratory comparison and recommended that a training workshop should be organized as soon as the Standard is approved¹.

It was noted that in order to participate in a TPS a laboratory must be competent in the use of the method required for the test, this is highlighted in the draft Standard.

Laboratories organizing interlaboratory comparison should ensure the quality of the samples (e.g. that the sample matches (as closely as possible) the materials encountered in routine testing, ensure the homogeneity and stability of the samples). The Workshop noted that the draft Standard should provide information on these issues. The Workshop recommended that the Standard should include guidance on TPS organized for more than one test in parallel.

Reference material

Access to reference material was again noted as a challenge for the organization of interlaboratory comparisons.

Movement of samples in the framework of PT/TPS

Restriction of movement of samples containing regulated pests was often a challenge. The Workshop reiterated the recommendation made at the first Workshop for heads of laboratories that exchange of material between laboratories should be facilitated. It was recommended that heads of NPPOs should be made aware of this difficulty.

Information sharing

It was suggested that the laboratories organizing PT or TPS should be identified in the EPPO database on Diagnostic expertise.

The Workshop recommended that the Panel on Diagnostics and Quality Assurance should discuss how information on the programmes planned in laboratories for PT or TPS can be shared. It was however recognized that there is often a limit in the number of possible participants for technical reasons which might discourage the use of wide ranging communication.

Roles of National Reference Laboratories (NRL)

The Workshop discussed the possible roles of national reference laboratories and came up with a list of essential and optional tasks. It noted that the situation may differ between countries where a single laboratory is responsible for routine diagnosis of regulated pests and those where a network of laboratories is in place.

It was considered that it should not be the role of a National Reference laboratory to establish and maintain collections when access to existing collections is available. However maintenance of working collections and distribution of controls is essential. The Workshop noted that the recommendation to develop a guideline describing the tasks of NRLs to harmonize the approach in the entire region had been made at the previous workshop for heads of laboratories and recommended that the list of tasks established during the meeting is used to develop this guideline.

Tasks identified as essential

- To establish official diagnostic protocols without duplicating existing work carried out in EPPO. Involvement of NRL scientific staff in the EPPO diagnostic programme should be encouraged. An important task regarding the establishment of official diagnostic protocols is the validation of tests.
- To ensure that official diagnostic protocols are used in the other laboratories performing official plant pest diagnostics in the country and receive feed-back from these laboratories on the protocols.
- To train the staff of other laboratories performing official plant pest diagnostics in the country.

¹ It was suggested that it could possibly be organized in the framework of the Workshop on accreditation.

- To participate in proficiency tests
- If necessary and technically possible to organize proficiency tests
- To provide technical-scientific support to the NPPO (including contribution to Pest Risk Analysis)
- To provide information to the other laboratories performing official plant pest diagnostic in the country on new developments in diagnostics.
- Where relevant, to assist actively in the diagnosis of outbreaks of plant pests by analyzing samples for confirmatory diagnosis, characterization and taxonomic studies.

Tasks considered beneficial but not essential for all NRLs:

- Participation in research projects including projects on epidemiological studies.
- To establish or be part of a network for international cooperation (e.g. with laboratories in other countries in particular for emerging pests).
- Support for inspection/surveys performed by the NPPO.
- Training of experts from other countries.

It was noted that the establishment of regional laboratories in the EPPO region could be valuable and that their tasks could include:

- The organization of PT and TPS.
- The coordination of development of methods and their validation.
- To provide information on where reference material is available and if relevant to provide such material
- To provide confirmation of a diagnostic result when required
- To provide or coordinate training
- To provide information on new developments in diagnostics

However, it was observed that issues such as how these should be funded and what their legal basis could be, need to be resolved. The Workshop was informed of the latest developments in the EU regarding the establishment of EU reference laboratories.

Reference material

The Workshop noted that there was a need to define the term ‘reference collection’.

Reference collections should not only include regulated pests but also their look-alikes.

Some participants recommended that strains or isolates used in validation of tests and as references in diagnosis should be deposited in public service reference collections. The Workshop considered that this issue has consequences which deserve further discussion.

Regional collaboration for reference collections

The consolidation of national collections into regional collections was discussed. It was recognized that laboratories may wish to keep their own collections but some participants considered that it is more efficient if regional collections are established and that laboratories send their specimens to well established collections. It is noted that some duplication (e.g. specimens placed in 2 or 3 collections) is necessary.

Availability of/ awareness of where to find reference material

The Workshop noted that depending on the disciplines access to reference material was limited (in particular for phytoplasmas, live nematodes, infected plant material, invasive alien plants). An inventory of existing reference and working collections is considered essential and the creation of a single portal for this information would be valuable. It was noted that Q-bank already provides information for many quarantine pests. The Workshop was informed about the EU call on: Improved coordination and collaboration for EU Plant Health reference collections and hoped that this project will help improve the access to reference material. It was noted that access to plant material for bioassay and pathogenicity testing can also be problematic (e.g. specific indicator hosts)

Quality of reference material

Providing reference material with guaranteed pathogenicity is a challenge and it was suggested that this should also be addressed in the framework of the EU call.

It was also recommended that minimum harmonized quality standards are established (e.g. maintenance of collection, information required on the specimen). The Workshop noted that these issues will also be addressed in the framework of the EU project.

Movement of reference material

Restriction of movement of reference material was often a challenge. The Workshop reiterated the recommendation made at the first Workshop for heads of laboratories that exchange of material should be facilitated. **It was recommended that heads of NPPOs should be made aware of this difficulty.**

Possible scope of regional reference laboratories

A brainstorming session on the different possible set up for scopes of regional reference laboratories was carried out. It was noted that in the plant health sector, the range of crops and pests to be covered is extremely high and varied. Defining regional reference laboratories for all regulated pests is not feasible and also not necessary. It is recommended that Regional Reference Laboratories are embedded in existing National Reference Laboratories.

Several approaches were discussed including:

- Discipline specific (e.g. entomology, nematology, phytoplasmas ...)
- Matrix specific (e.g. plants for planting, forest trees....)
- Pest or taxa specific (e.g. *Bursaphelenchus xylophilus*, *Phytophthora* spp.,)
- Pest or taxa/ matrix combinations approach (e.g. potato bacteria, Citrus spp. viruses)
- Methods approach (e.g. for phytoplasmas and viroids).

The advantages and disadvantages of these approaches were discussed and the Workshop agreed that a mixture of these will probably be the most appropriate.

This was the first occasion for this issue to be discussed in a group of heads of laboratories and it was recognized that it deserves further discussion between heads of laboratories as well as with heads of NPPOs because of resource implications.

Other recommendation

EU participants will investigate the possibility to initiate a COST action on national and regional reference laboratories in plant health.