Food and Agriculture Organization of the United Nations

International Plant Protection Convention

REPORT

Technical Panel on Diagnostic Protocols (TPDP)

Paris, France

30 October – 3 November 2023

IPPC Secretariat

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1. Opening of the Meeting

1.1 Welcome

[1] The Standard Setting Officer, Adriana G. MOREIRA, from the International Plant Protection Convention (IPPC) Secretariat (hereafter "the secretariat"), welcomed the participants of the Technical Panel on Diagnostic Protocols (TPDP) meeting and thanked the European Plant Protection Organization (EPPO) for hosting the meeting in their headquarters in Paris, France.

[2] Ms Valérie GRIMAULT, EPPO Assistant Director, welcomed all participants and wished them a fruitful meeting.

[3] The Secretariat welcomed the new members Andrew Sarkodie APPIAH and Vijayasankar RAMAN.

2. Meeting Arrangements

2.1 Selection of the chairperson

[4] The TPDP selected Ms Géraldine ANTHOINE (France) as chairperson.

2.2 Election of the rapporteur

[5] The TPDP elected Ms Julie PATTEMORE (Australia) as rapporteur.

2.3 Adoption of the agenda

[6] The TPDP adopted the agenda (Appendix 1).

3. Administrative matters

[7] The documents list (Appendix 2) and the participants' list (Appendix 3) had been made available to the TPDP before the meeting.

3.1 Documents list

[8] The IPPC Secretariat introduced the documents list.

3.2 Participants list

[9] The TPDP Steward, Álvaro SEPÚLVEDA LUQUE and one TPDP member, Mr Vijayasankar RAMAN were unable to attend the meeting.

3.3 Local arrangements

[10] The host presented the local information.

3.4 Review of the IPPC standard setting procedure

[11] The IPPC Secretariat presented the standard setting process[1], underlining the specific process to develop the diagnostic protocols (DPs), with respective deadlines for each stage.[2] The IPPC Secretariat recalled that DPs are developed as annexes of ISPM 27 under the supervision of the Standard Committee (SC) based on Specification TP 01[3].

[12] The TPDP :

(1) *noted* the presentation on the standard setting process

[1] Presentation SS process: https://ippc.int/en/publications/90063/

[2] IPPC Procedure Manual for Standard Setting (2022-2023): www.ippc.int/en/publications/85024/

[3] Specification TP 1 – TPDP: https://www.ippc.int/en/publications/1297/

4. TPDP work programmee - Revisions and approval to the Standards Committee (SC) for consultation period in January 2024

4.1. Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031), priority 2

[13] The discipline lead, Vessela Assenova MAVRODIEVA, presented the draft DP and supporting documentation[4]. The DP was sent for expert consultation. The TPDP reviewed the draft DP and discussed the issues at the relevant points in the draft.

[14] **Expert consultation**. The TPDP made the general comment that often few comments are received through the expert consultation, and then at a later stage, at the country consultation lot of technical comments are submitted. The TPDP suggested to improve the outreach to ensure that experts are reached and comments are provided at the earliest possible stage of the development of the DP.

[15] **Acknowledgement.** The TPDP requested the editor to harmonize the acknowledgement section, to reference the EPPO protocols and include the statement ”with permission”.

[16] **Inhibition.** The TPDP discussed that dilution of the solution could be helpful when plant material contains inhibitors of DNA multiplication. The TPDP agreed to request the drafting group to include text to address this into the end of section 3.3.2 Leaves. It was also noted that this may impact the sensitivity of the diagnostics.

[17] **Pepper seeds.** It was noted that when using pepper seeds, the inhibition of plant factors could be higher, and thus the buffer volume was increased to 40 ml.

[18] **Naktuinbouw protocols.** The Lead author noted that the specific protocol is not available at the link provided. One participant noted that the duration of the homogenization should not be prescriptive, but rather based on the look of the mixture, as it could be dependent on the equipment used. The author suggests 4 minutes on a particular equipment but the TPDP agreed to add a sentence to allow for adjustment depending on the equipment. The discipline lead will follow up with the lead author regarding requesting access to the Naktuinbouw protocol.

[19] **Include PSTVd**. Originally the scope excluded the Potato spindle tuber viroid, as this species is mostly on potato and tomato, and there is a separate adopted DP 7 for this viroid. Since this is a generic diagnostic method for pospiviroids, the TPDP suggests to change the title of the DP and not exclude the PSTVd. The DP drafting group and the discipline lead will review the draft DP and DP 7 again to double check for overlap and if this draft DP covers all information they will recommend the revocation of DP 7.

[20] **Table 2 and information on validation (Appendix 1)**. When the validation data is cited, it should be mentioned, what are the limitation of the PCR method that was used One member suggested that it is easier to read if all information is provided at the instructions to administer the test and not in a separate place in the Annex. It was proposed that the information on sensitivity and specificity is merged to the main text, at Table 2. The TPDP agreed to suggest to have validation data next to the test methods (and not is a separate annex), and requested the drafting group to evaluate the feasibility of this, noting the large volume of work this would require.

[21] **Host range**. The TPDP noted that it needs to be reviewed where the EPPO Global Database is referenced. They also noted that pospiviroids are not always seed transmitted, and there should be specific information on what hosts and viroid is it true for. It was discussed that this is difficult to establish to all host species and it was requested that references be provided to establish these connections between viroids and seed transmission. It was agreed that this would be captured in the detection section under the 3.3.4 Seeds to recommend that seed testing is only used in viroids that seed transmission is recorded for. However some TPDP members were concerned that this is too stringent requirement, and that in practice, methods that result in the detection of several species are used even

[4] 2018-031, 31_TPDP_2023_Nov, 27_TPDP_2023_Nov

when not all are recorded as seed transmitted. The TPDP agreed keep the DP general and not limit the application of the test .

[22] **Flowchart**. It was suggested that the last box of the flowchart is changed to not include detection anymore, however it was agreed that some methods only allow the detection to be confirmed but does not allow to identify the species. That can only be done by sequencing. The TPDP discussed to explain this concept in the chapeau paragraph to the flowchart. They suggested that the drafting group explores to add "some viroid can be detected and identified simultaneously, while others not". The TPDP suggested to align the last box of the flowchart with this paragraph, and include "if appropriate" at the beginning: If appropriate, an independent test (i.e. a test using a different method or conducted by a different laboratory) should be conducted to confirm detection. The methods recommended or available for such confirmatory tests are the same as for the initial test (as described in the following subsections of 3.4.3, Table 2 and Table 3).

[23] **Isolate**. The TPDP discussed in reference to the section on Host range and symptoms that there are no isolation in viruses, however it was clarified that in this case, an individual virus would be an isolate.

[24] **Table 2 – additional references**. The TPDP acknowledged that there are more recent studies and publications that are not yet included in Table 2. Recommended methods for the detection of listed Pospiviroid species. They discussed that it is preferred to have validation data for each method The drafting group will review the list and if further references and validation data could be added to the table.

[25] **Storage temperature at the end of PCR**. The storage temperature at the end of the PCR cycles should be between 4 °C and 20 °C. The TPDP requested the discipline lead to add explanation to the DP why this range of temperature is necessary.

[26] **Primer vs reaction mix**. In Tables 19-24 the TPDP requested the drafting group to revise the titles to clearly reflect if they include the ingredients to a primer mix or a reaction mix, and consistently change it in the text as well.

[27] **High throughput sequencing (HTS)**. The TPDP discussed if they should include methods that are not yet completely developed, and cannot be described in detail, and considered including it in the Other detection methods section however since HTS is mentioned without any details specific to pospiviroids, the TPDP decided to remove it from the section. Other methods included (hybridization) can be practical to use in field inspections, so they were kept.

[28] **Minimum controls**. The TPDP noted that for RT-PCR, a positive nucleic acid control and a negative amplification control (no template control) are the minimum controls that should be used. The TPDP discussed that internal controls should also be required and therefore included in the minimum, however some noted that in some cases there are no available methods for internal controls and although it increases reliability, the test could be run without. The TPDP agreed to review the Instructions to authors as a horizontal issue and come back to the draft to revise it accordingly.

[29] Once the entire draft DP was reviewed by the TPDP, the Secretariat explained the future scenarios and respective deadlines.

[30] The TPDP:

(2) *thanked* the drafting group of this draft DP - Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031);

(3) *recommended* to change the title of Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031) in order remove the exclusion of PSTVd to: Pospiviroid species (2018-031);

(4) *agreed* that the discipline lead will check if the content of DP 7 is covered in its entirety and will propose whether to revoke DP 7 or not.

(5) *agreed* to recommend to the SC the approval of the draft DP for Pospiviroid species (2018-031) for consultation in 2024 with the adjustments agreed to at this meeting;

4.2 *Heterobasidion annosum* (2021-015), priority 3

[31] The lead author, Yazmin Rivera RIVERA, presented the draft DP and supporting documentation[5]. The TPDP then reviewed the draft DP and discussed the issues raised by the lead author at the relevant points in the draft.

[32] **Hybrids**. The TPDP acknowledged that there are methods in the protocol that will detect the hybrids of the target species and this would need to be explained into the draft DP. The discipline lead will follow up with the authors.

[33] **Methods and flowchart**. The lead considered whether to include a flowchart, but agreed that it would be misleading, as not all PCR methods detect all 5 pathogenic species, so there maybe a potential for a false negative.

[34] **Title**. The TPDP agreed to changing the title to include "sensu lato" (=in a broad sense), as the *Heterobasidion annosum* is a species complex and includes several subspecies that are addressed in the DP. The title is more accurate this way.

[35] **Drafting group**. The TPDP noted that the drafting group has done a good job, and have produced a good and easy to read draft.

[36] **Culture medium**. The TPDP discussed that the composition of the recommended general media is augmented with antibiotics, which is normally added after the autoclave sterilization was done and not before, they requested to consider moving it below in the table where the ingredients that are added after sterilization are listed. They also noted that the full volume of the mixture does not add up and asked the discipline lead to double check these.

[37] **Collection of samples**. The TPDP asked clarification how vacuum is used for the collection, and to possibly include references.

[38] **The interpretation of results**. The authors included the description of the interpretation of the results of PCR tests into the text at the end of each section, although the tables clearly indicate this already. The TPPD agreed that the interpretation of results should follow the format of the Instruction to authors, and be included in a separate section.

[39] The TPDP also discussed if the confirmation of the results would mean sequencing or other confirmation methods could be used as well and requested the authors to confirm. The TPDP also requested to add the information if a primer is forward or reverse.

[40] **Controls**. The TPDP discussed the minimum requirement of using controls. They agreed that a positive nucleic acid control and a negative amplification control (no template control) are the minimum controls that should be used (see discussion recorded in section 4.1under Minimum control).

[41] **Electrophoresis gel components**. The TPDP requested the discipline lead to confirm with the authors if the recommended composition of the gel is specific to the pest, and is needed to be specified.

[42] **RT-PCR**. The TPDP noted that the interpretation of the real time PCR is not based on the detected amplicon length, and thus the "expected amplicons" sections should be deleted from the tables for real time PCRs.

[43] **LAMP results**. The TPDP agreed to describe the results in the Interpretation of results section, along with any peak curves.

[44] The TPDP:

(6) *thanked* the drafting group of the draft DP - *Heterobasidion annosum* (2021-015)

[5] 2021-015, 30_TPDP_2023_Nov, 21_REV_TPDP_2023_Nov

(7) *recommended* changing the title from *Heterobasidion annosum* (2021-015) to *Heterobasidion annosum* sensu lato (2021-015)

(8) *agreed* to recommend to the SC the approval of the draft DP for *Heterobasidion annosum* sensu lato (2021-015) for consultation in 2024 with the adjustments agreed to at this meeting

4.3 *Meloidogyne mali* (2018-019), priority 3

[45] The lead author, Geraldine ANTHOINE, presented the draft DP and supporting documentation[6]. The TPDP then reviewed the draft DP and discussed the issues raised by the lead author at the relevant points in the draft.

[46] **Sampling**. The TPDP agreed that more guidance is needed for sampling. They requested the drafting team to add more information on extraction techniques (transferring of nematodes), sampling and handling of samples.

[47] **Extraction methods.** The TPDP asked that the discipline lead and drafting group to include more information for the extraction step, as this may be done by generalists in a laboratory.

[48] **Combination of methods**. The TPDP discussed if one or more methods need to be used, and agreed that in some cases only morphological methods maybe available to use. The draft does say that for most reliable identification, a combination of morphological and molecular method should be used.

[49] **Temperature**. The TPDP agreed to specify "fridge temperature" numerically.

[50] ***M. paramali***. The TPDP noted that a new species was added to the DP that maybe similar to *M. mali* and thus could be important to distinguish between them.

[51] **Access to publications.** The discipline lead noted that they didn't have access to the publication of Wei at al 2016, and the TPDP agreed to request access to it and if it is not accessible, it should not be included (or described in detail within the DP, so the publication is not needed).

[52] **Validation.** The TPDP noted that there is insufficient validation data for the molecular methods described in this DP.

[53] **Controls.** The TPDP agreed to expand on this section to clarify the minimum requirements.

[54] **Isozyme electrophoresis**. The TPDP discussed that this is an outdated method and it is not easy to perform, but there is a lot of data on it, and some laboratories are only able to use these kinds of methods, so it should be maintained in the DP.

[55] **Listing authors**. The TPDP discussed whether to list the authors in alphabetical order or put the lead author first. They noted that the users of the DPs might contact the people listed, but it was considered that it is not necessarily the first person on the list they contact, they will probably contact the person from their region. Therefore the TPDP agreed that for this DP at least, they will list the authors in alphabetical order (not listing the lead author at the beginning).

[56] The TPDP:

(9) *thanked* the drafting group of this draft DP - *Meloidogyne mali* (2018-019)

(10) *agreed* to follow up with the drafting group regarding the discussion at this TPDP meeting and present it back to the TPDP at a later date (send to Secretariat by the 1 February).

[6] 2021-015, 30_TPDP_2023_Nov, 21_REV_TPDP_2023_Nov

5. TPDP work programme - Revision and approval to the Standards Committee (SC) for DP Notification period

5.1 Revision of DP 27: Ips spp. (2021-004), priority 1

[57] The discipline lead, Norman BARR, introduced the draft DP and the supporting documentation[7].

[58] **Native distribution of Ips spp.**. In table 1 the DP describes the native range of the host genera on which certain Ips species maybe found. One comment suggested to delineate North America according to the region covered by the North American Plant Protection organization (Canada, US, Mexico), however the TPDP noted that the DP was already adopted with this wording and it is also an arbitrary delineation of a geographic region to indicate where the pest is endemic.

[59] **Unmanufactured wood**. One comment requested explanation what unmanufactured wood was exactly, and the TPDP discussed that it should be raw wood, that has not been treated. They also noted that there is no proposal on how to modify the text, however to be consistent with ISPM 5 (*Glossary of phytosanitary terms*) and terms used in ISPM 15 (*Regulation of wood packaging material in international trade*), the term unmanufactured is removed and text modified for clarity as follows: "Life stages of Ips are can be disseminated through host plants or raw wood used for solid wood packaging material and wood products, when present underneath the bark or in the phloem."

[60] **Target species**. One comment queried why 14 of the 37 Ips species were selected as target species, and why. The explanation for this is included in section 4.1.6 of the DP and the TPDP added further explanation to improve clarity, in Section 1 "This IPPC protocol is focused on diagnosis of 14 Ips species (Table 2) based on their known pest status according to CABI and EPPO (1997). These 14 are treated as target species in the protocol. Other Ips species in the protocol are referred to as non-target (NT) species in keys but these species could also cause tree mortality, especially if introduced outside their native ranges."

[61] The TPDP:

(11) *thanked* the drafting team of this draft DP - Revision of DP 27 – *Ips* spp. (2021-004);

(12) *agreed* to recommend review this draft DP once more via e-decision before approval for adoption (Notification Period in July 2024) with the adjustments agreed at this meeting.

5.2 Revision of DP 25: *Xylella fastidiosa* (2021-003), priority 2

[62] The DP discipline lead, Robert TAYLOR, introduced the consultation comments, the summary of comments and the revised draft DP[8].

[63] The TPDP reviewed the responses to comments and discussed the following:

[64] **Diagnostic capacity**. One comment raised that developing countries might have a difficulty applying the PCR techniques described in the protocol due to the lack of appropriate laboratory equipment. The TPDP noted the difficulty and acknowledged that the reliable identification in this protocol are reliant on PCR methods however there are some cultural and serological methods in the protocol for detection and some cultural methods for identification. The TPDP discussed whether identification would be accepted based on two non-PCR technique, and although they agree that the protocol says so, they weren't sure if that was indeed accepted in practice. The TPDP discussed whether to make it mandatory to have at least one of the method be a PCR, but agreed that it was not part of the scope of the revision to alter the minimum requirements. Instead, they clarified that isolation is not one of these methods, and created two new tables that include the acceptable methods to be combined, one for identification and one for detection.

[7] 2021-004, 25_TPDP_2023_Nov, 23_TPDP_2023_Nov

[8] 2021-003, 24_TPDP_2023_Nov, 22_TPDP_2023_Nov

[65] **Policy**. The TPDP noted that there are several comments regarding the fact that some countries do not accept non-PCR methods. The TPDP decided to reply with explaining that countries may set harsher requirements then the minimum requirements in the DP, if they wish so and have technical justification.

[66] **Outbreak**. The TPDP recognised that the time when the protocol was first adopted it was a recent outbreak of Xylella and the wording reflects that, however they agreed with the comments suggesting to rephrase this and adjusted the wording accordingly.

[67] **Abiotic symptoms**. One comment suggested to include a reference which is only available in French language, that would demonstrate abiotic symptoms compared to the symptoms caused by Xylella. The TPDP agreed to include the link as a reference.

[68] **Vector identification**. The TPDP agreed that the focus of the DP is not the vector identification, but the identification of the bacteria in the vector, and removed some text and instead just directed the reader to the appropriate resources. They also restructured the draft to separate the sections on sampling and testing of vectors.

[69] **Identification vs detection**. The TPDP requested the Lead author to revise the text to clarify which methods are for detection and which one is for identification.

[70] **Removal of outdated protocol**. The TPDP decided to remove the method which is over 20 years old and is no longer widely used. There is no recent validation data and thus the TPDP agreed to remove from the protocol. There are two other conventional PCR methods in the DP, that are more widely used and have validation data for.

[71] **Test on culture or diseased plant material**. The TPDP discussed whether some of the identification methods can be applied to isolated cultures only or also to infected plant material directly. They agreed that it was indeed possible, and that the drafting group would review the draft and make sure that it is clear in the text.

[72] The TPDP agreed to request the discipline lead to review the Revision of DP 25 - Xylella fastidiosa (2021-003) based on the comments at the meeting and present it back to the TPDP via e-decision again.

[73] The TPDP:

(13) *thanked* the drafting team of this draft DP - Revision of DP 25 - *Xylella fastidiosa* (2021-003);

(14) *agreed* to request the discipline lead to review the Revision of DP 25 - *Xylella fastidiosa* (2021-003) based on the TPDP's comments at the meeting and present it back to the TPDP again via e-decision.

5.3 Revision of DP 09 - Genus Anastrepha Schiner (2021-002), priority 2

[74] The DP discipline lead, Norman BARR, introduced the draft DP and the supporting documentation[9].

[75] Although the TPDP was unable to review the responses to the comments as they were not completed at the time of the meeting, they had a general discussion and agreed to request the discipline lead to review the DP and the respond to the comments according the discussion, and present it back to the TPDP again via e-decision again.

[76] The TPDP:

(15) *agreed* to request the discipline lead to review the Revision of DP 09 - Genus Anastrepha Schiner (2021-002) and the respond to the comments and present it back to the TPDP again via e-decision.

[9] 2021-002 (version submitted for consultation period), Link to compiled comments, 29_TPDP_2023_Nov

6. TPDP Review of DPs proposals from the 2023 IPPC call for topics

[77] The Standards Committee (SC) in May 2023 agreed that the Technical Panel on Diagnostic Protocols (TPDP) could review and provide inputs into the diagnostic protocols (DPs) submissions from the IPPC call for topics: standards and implementation.

[78] **IPPC Task Force on Topics (TFT) first assessment on DPs proposals - Annex to ISPM 27 (Diagnostic protocols for regulated pests)**. The secretariat introduced the documents[10] providing the preliminary assessment of the TFT and the final recommendation (outcome of the TFT meeting in October). The TFT agreed to recommend to include all submitted topics to the work programme with priority 2 or 3.

[79] The TPDP was invited to provide their review of these topics applying the *Criteria for the prioritisation of diagnostic protocols*[11] to each pest and prepare a conclusion, taking into account the *IPPC strategic objective(s)*[12][13] to which this diagnostic protocol relates. (IPPC Strategic Objectives: A, Food Security; B, Environmental Protection; C, Trade Facilitation; D, Capacity Development). The review is conducted using the *Consideration of proposals for diagnostic protocols* developed by the TPDP and prepare a final recommendation to the SC on whether an IPPC diagnostic protocol should be developed for this pest (and, if so recommending a working priority between 1 and 4, with 1 being of high priority and 4 being of low priority).

[80] The TPDP highlighted that there is a need for a further reassessment of the DPs priorities once they are added to the work programme in their next face to face meeting, considering the existing DPs in the work programme.

6.1 2023-003 Developing Diagnostic Protocols for the Coconut Rhinoceros beetle (CRB): *Oryctes rhinoceros*

[81] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[14].

[82] TFT members agreed that the proposed Diagnostic Protocol (DP) is relevant from an IPPC perspective and within the IPPC mandate because the proposal aims to properly identify the pest and apply appropriate control methods, therefore minimizing its impact. Members also added that determining the strains of CRB helps to support management decisions, prevent the spread of pests, and promote food security.

[83] TFT members also agreed that the topic is relevant from a global perspective because CRB is a major pest on coconuts and in the last decade several new strains of CRB have been identified and do not respond to the current control methods thus causing extremely high levels of damage to coconuts. Members identified that this DP will have an important impact on agriculture trade as there are many commodities made from coconuts.

[84] The recommended priority is 2.

[85] The TPDP noted the comments made by the TFT and noted that while a DP on CRB is not in the framework for standards and implementation, the development of a DP would benefit a whole region.

[86] The TPDP also noted that one TFT member believed it is more important to develop Guide to management strategies of coconut rhinoceros beetles (integrated approach that combines cultural,

[10] 07_TPDP_2023_Nov, 35_TPDP_2023_Nov
[11] IPPC Procedure Manual for Standard Setting (2015-2016): https://www.ippc.int/en/publications/81596/
[12] List of topics for IPPC standards: https://www.ippc.int/en/publications/81978/
[13] IPPC Strategic Framework: https://www.ippc.int/en/media-kit/
[14] 08_TPDP_2023_Nov

biological, and chemical control methods), however they also noted that it is outside the scope of the TPDP and ISPM 27.

[87] The TPDP:

(16) *agreed* with the TFT recommendation, and supported the addition of the DP for the coconut rhinoceros beetle to the worprogramme. with priority – 2. The TPDP noted that the title will have to be adjusted according to IPPC style.

6.2 2023-009 HTS Identification of regulated bacteria isolated from plants, Annex to ISPM 27 (Diagnostic protocols for regulated pests)

[88] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[15].

[89] TFT members highlighted that the proposed DP is relevant from an IPPC perspective since the use of the diagnostic protocols will lead to minimizing the spread of plant pests. This will also facilitate safe trade by stopping the movement of diseased plants. It was added that this DP supports the implementation of CPM R-08 along with alignment with diagnostic lab networking.

[90] The recommended priority was 2.

[91] The TPDP noted that the TFT felt this DP proposal was aligned with the Strategic Objective A: Enhance global food security and increase sustainable agricultural productivity, and Development Agenda 8: Diagnostic Laboratory Networking and underpins the importance of establishing a network of diagnostic laboratory services and diagnostic protocols to help countries identify pests in a more reliable and timely manner.

[92] Regarding the feasibility of developing this proposal, members highlighted that the TPDP could review the proposal since there are experts available and existing resources.

[93] The TPDP discussed that there is a strong need to harmonize the sequencing technology, minimum standards, analysis approach, and interpretation of data/results reporting for the HTS-based identification of culturable bacteria isolated from plants. They noted that all of these aspects may have significant impact on the identification and interpretation of results, especially as it pertains to identification of bacterial strains below the species level, which often rely on classification systems defined by phenotypic traits and not evolutionary history or genetics.

[94] They highlighted that harmonization of identification standards at the sub-specific level may need to be taken on a pathogen-specific basis (e.g. pathovar identification) and would likely require input from subject-matter experts. The proposal also suggests that harmonization of DNA extraction and library preparation methods are needed. These wet-lab techniques are less of a concern as they often do not have an impact on the resulting sequence data when working with pure bacterial cultures using a range of standard procedures that are available. This may also pose a challenge when laboratories outsource their services to sequencing centers. Any issues that may be of concern can be addressed by harmonizing sample submission, controls required, data quality standards and bioinformatic methods.

[95] HTS-based identification is particularly relevant in the case of a new host record, first report in a new geographic region, or in the first detection of a high impact actionable detection where fine-level resolution may be needed for identification below the species level. These situations arise commonly for NPPOs on a yearly basis. In summary the TPDP agreed to support the development of this proposal and consider it to be of high importance and high impact.

[96] The TPDP also discussed the limitations of the topic, and noted that the topic should be focused on pure bacteria culture. They recommended adjusting the title to reflect that. The scope of the proposed annex

[15] 20_TPDP_2023_Nov

maybe reviewed, it would discuss the different methods to be used to analyze bacterial genome with since the TPDP had diverging opinions on how much detail to include.

[97] It was also noted that there is a EPPO standard in HTS for bacteria including validated tests that would assist the application of the technology.

[98] The TPDP:

(17) *agreed* with the TFT recommendation, and supported the addition of the topic to the work programme with priority – 2.

(18) *recommended* to change the title to HTS Identification of pure culture of phytopathogenic bacteria isolated from plants, Annex to ISPM 27 (Diagnostic protocols for regulated pests) (2023-009)

6.3 2023-010 *Alopecurus myosuroides*

[99] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[16].

[100] TFT members established that black grass is one of the worst agricultural weeds in Europe and other areas, and a DP would be beneficial to many countries because it is a harmonized diagnostic protocol for an invasive weed.

[101] The recommended priority was 3.

[102] The TPDP noted that it maybe hard to find authors, but that they agreed with the need to develop such DP.

[103] The TPDP:

(19) *agreed* with the TFT recommendation and recommended adding *Alopecurus myosuroides* (2023-010) to the TPDP work programme with priority 3.

6.4 2023-011 Diagnostic Protocol for detection and identification of Xylella vectors

[104] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[17].

[105] TFT members highlighted that the proposed DP relates to the mission and vision of IPPC mandate and that it will facilitate safe trade through the diagnosis of the vectors of *Xylella fastidiosa*. It was added that identification of the vectors at the field level or border will mitigate the spread and impact of the disease.

[106] The recommended priority was 2.

[107] The TFT also noted that the proposed DP is appropriate, but the proposal for a DP for several non-individualized vectors (suborder Auchenorryncha) is very open, and it is not possible to determine the workload or how extensive this task could be..

[108] The TPDP noted the assessment of the TFT and considered that since this is a broad topic, as there are many vectors from different genera. The TPDP noted that based on the resource https://insectvectors.science/, Xylella fastidiosa is vectored by 59 species. If the protocol is intended to compile information on diagnosis of native species from around the world that share appearance to known vectors and to evaluate DNA barcode records for suitability because there is not a method

[16] 09_TPDP_2023_Nov

[17] 18_TPDP_2023_Nov

published with validation data to support confidence, then this protocol will require significant research and revision work.

[109] The TPDP recognized the importance of this topic, but felt that this topic is not feasible, unless the scope is narrowed They noted that to develop a DP for a region would be possible, but a worldwide one would be a considerable challenge unless the scope is narrowed (e.g. to top 5 vectors). Therefore the TPDP did not recommend to add this to the work programme.

[110] The TPDP:

(20) *agreed* to recommend not adding the topic for the Diagnostic Protocol for detection and identification of Xylella vectors (2023-011) for their work programme.

6.5 2023-012 Diagnostic Protocol for detection and identification of *Halyomorpha halys* (Brown Marmorated Stink Bug)

[111] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[18].

[112] The TPDP noted the TFT evaluation and noted that they felt that the proposed DP is important for the identification of *Halyomorpha halys* which is an important pest from a global perspective, rapidly expanding from Asia to the United States, Europe, Canada, and Chile in the Southern Hemisphere, and it attacks more than 300 plant species.

[113] The recommended priority given by the TFT was 2.

[114] The TPDP noted that this is an easily identifiable pest by the naked eye, but that using molecular methods like barcoding and MALDI-TOF maybe useful. They agreed that this is an important pest and there are a lot of available material and they recommended adding it to the work programme by priority 1. The increased priority is due to the importance of the pest and the ease and feasibility of developing the DP. Early detection is vital of this highly invasive pest.

[115] The TPDP:

(21) *agreed* with the TFT recommendation and recommended adding Diagnostic Protocol for detection and identification of *Halyomorpha halys* (Brown Marmorated Stink Bug) (2023-012) to the TPDP work programme with priority 1.

6.6 2023-015 Diagnostic protocol for *Bactrocera correcta*

[116] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[19].

[117] The TPDP noted the TFT evaluation and noted that they felt that the proposed DP is difficult to develop, the identification of immature stages is difficult to do. Since there is an ongoing DP for *B. zonata*, which describes much of *B. correcta*, and probably would allow the identification of this pest . The TPDP discussed whether to add the proposed topic to the one already developed for *B. zonata* and merge them.

[118] The TPDP:

(22) *agreed* with the TFT recommendation and recommended adding Diagnostic protocol for *Bactrocera correcta* (2023-015) to the TPDP workprogramme with priority 2, noting the overlap with existing topics.

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[19] 11_TPDP_2023_Nov

6.7 2023-016 Diagnostic protocol for *Bactrocera tsuneonis* and *Bactrocera minax*

[119] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[20].

[120] The TPDP noted that developing a DP for this pest is feasible but since it is not as common and widespread as other fruit fly pests, they recommended priority 2.

[121] The TPDP:

(23) *agreed* with the TFT recommendation and recommended adding Diagnostic protocol for *Bactrocera tsuneonis* and *Bactrocera minax* to the TPDP work programme with priority 2

6.8 2023-017 DP: *Colletotrichum kahawae* J.M. Waller & Bridge

[122] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[21].

[123] The TPPT considered that the development of this DP is not feasible at the moment, the resources are not available (not published yet). They noted that the submitter is welcome to submit topic again if the research gets published.

[124] The TPDP:

(24) *agreed* to recommend not adding the topic for the *Colletotrichum kahawae* for their work programme

6.9 2023-025 DNA barcoding as an identification tool for regulated pests

[125] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[22].

[126] The TPDP agreed that developing a DP for this topic is not feasible, there need to be an available, big, complete database which is not the case currently. Some taxa are better covered, but some are missing. The TPDP felt that DNA barcoding is not ready to be used in harmonization, and supporting trade decisions. A wide range of specialists would need to be gathered to develop this DP. They agreed not to recommend the development of this DP.

[127] The TPDP:

(25) *agreed* to recommend not adding the topic for the DNA barcoding as an identification tool for regulated pests for their work programme

6.10 2023-026 Diagnostic protocol for Avocado sun blotch viroid

[128] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[23].

[129] The recommended priority was 2.

[130] Members added that a harmonized sampling and testing protocol will be useful in limiting the introduction of Avocado sun blotch viroid through infected seed and propagation material in international trade.

[131] The TPDP agreed that the development of a diagnostic protocol for ASBVd is recommended as it is an important pest avocado is an important culture in many countries, therefore the priority is proposed to

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[21] 16_TPDP_2023_Nov

[22] 19_TPDP_2023_Nov

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be raised to 1. The development of the draft DP is feasible considering the vast information on the pathogen and the availability of expertise and techniques for its detection.

[132] The TPDP:

(1) *agreed* with the TFT recommendation and recommended adding the diagnostic protocol for Avocado sun blotch viroid with priority 1.

6. 11 2023-029 Diagnostic protocol for False Codling Moth: *Thaumatotibia leucotreta*

[133] The TPDP reviewed the TFT evaluation regarding this proposal and the considerations prepared by the TPDP member assigned to this topic[24].

The TPDP agreed that this is an important pest of a wide range of hosts and although the submitter did not provide information on feasibility, the TPDP agreed that it is feasible, and therefore is the priority is recommended as 1. The TPDP also noted that EPPO protocol PM 7/137 is available to base the protocol on as a start.

[134] The TPDP:

(2) *agreed* with the TFT recommendation and recommended adding the diagnostic protocol for False Codling Moth: *Thaumatotibia leucotreta* with priority 1

7. TPDP work programme: Review of topics in the work programme

7.1 Update on draft DPs in the work programme

[135] The secretariat presented the updated work programme and the TPDP reviewed and discussed the upcoming activities and deadlines.

[136] The TPDP:

(3) *agreed* to update the drafting groups list

(4) *agreed* to the workplan as completed at the meeting

7.2 Selection of DP authors

[137] The IPPC secretariat introduced the recent attempts to select members of the drafting groups.

[138] The TPDP agreed to select for the DP *Microcyclus ulei* (2019-003) the following authors:

- Ms. Megan Kara ROMBERG (USA)
- Ms. Carlos Alberto HERNANDEZ MEDINA (Columbia)
- Guixiu HUANG (China) - lead author

[139] The TPDP agreed to select for the DP *Spodoptera frugiperda* (2021-016) the following authors:

- Zhihong LI (China)
- Mr. Diego Armando CARRERO SARMIENTO (Colombia) – lead author
- Mr. James Daniel YOUNG (USA)
- Ms. Iuliia Aleksandrovna LOVTSOVA (Russian Federation)

[140] The TPDP agreed to recommend the removal of DP *Moniliophthora roreri* (2019-005) from the work programme, as it is low priority and only one author could be identified after several attempts. The TPDP agreed to recommend the removal of DP *Moniliophthora roreri* (2019-005) from the work programme, as it is low priority and only one author could be identified after several attempts.

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[141] The TPDP thanked and acknowledged all countries nominating experts to the drafting groups, acknowledging their contribution to the development of diagnostic protocols.

[142] The TPDP:

(5) *confirmed* the new DP authors for each DP drafting group as listed in the report;
(6) *assigned* lead authors for each DP drafting group as indicated in the report;
(7) *requested* the IPPC secretariat to contact the selected authors to initiate the work;
(8) *requested* the IPPC secretariat to update the DP drafting groups contact information list on the IPP
(9) *recommended* to the SC the removal of this topic from the work programme, as it is low priority and only one author could be identified after several attempts for the DP *Moniliophthora roreri* (2019-005)

7.3 Quality assurance issues associated with diagnostic protocols for regulated pests

[143] Norman BARR introduced the document, which compiles terminology related to DP. The objective is to help the author with harmonization, but this is not a glossary. It was pointed out that this is a "live document" of the TPDP.

[144] The document was presented at the TPDP 2018 November meeting. On that occasion, the TPDP considered that this document should be revised and could be a guide for discipline leads. Then, the TPDP asked Mr BARR to review and present the document at the next meeting.

[145] The EPPO representative provided comments in the text and mentioned a table of correspondence for different terminology, which can be accessed in the revision of the EPPO standards PM 7/98 "Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity".[25] She also suggested the inclusion of a column for the IPPC glossary in the referred table.

[146] The TPDP requested that the mentioned table will be made available for the next meeting.

[147] ***Nucleic Acids Controls.*** The EPPO representative suggested to add a note to clarify controls when an EPPO protocol is used to prepare an IPPC protocol, as the terminology is slightly different. She also pointed out that a description of internal controls is missing in the quality assurance document. The TPDP agreed with both suggestions.

[148] ***Diagnostic sensitivity*** and ***Diagnostic specificity.*** The EPPO representative also suggested wording for the sub-items.

[149] ***Validation*** and ***Verification.*** The EPPO representative informed that, for both sub-sections, EPPO refers to the process described in PM7/98. The TPDP suggested to check the mentioned reference and ISO 17025:2017 cited in the text.

[150] EPPO representative provided an updated reference to the EPPO (2018) PM 7/76 (5) useful for the whole document.

[151] The TPDP agreed with the changes proposed by Mr BARR and EPPO's suggestions and asked the document's author to update the document considering these suggestions, ISO 17025:2017 definitions and the instructions to authors.[7]

[152] The TPDP:

(10) *asked* Norman BARR to review and update the document "Quality assurance issues associated with diagnostic protocols for regulated pests" and present it during the next face to face TPDP meeting.

[25] https://onlinelibrary.wiley.com/doi/epdf/10.1111/epp.12780

7.4 Updates on FAO and IPPC style guide

[153] The IPPC secretariat introduced the issue regarding the new FAO style guide and the two options to provide references to tables. The TPDP was invited to provide feedback on their preference of references relating to tables quoted below the tables or at the end of the DP in a separate subsection under the references.

[154] The TPDP agreed that it is preferable to quote reference directly under the table where they are quoted. The TPDP noted that if the same reference is not cited in the text, it would not be listed under the general references section.

[155] **Simplifying**. Some members noted that the text could look busy with the citation provided both the table and the reference also below, and if possible it would be better to replace citations in the table with numbers, that refer to these number when spelling out the full reference under the table.

[156] **Hyperlinks**. Another member suggested adding hyperlinks (with access to the publications) to the citation (e.g Zakarya and Alhassan (2014)) inside the tables and provide the full details of the reference in the references section at the end (e.g Zakariya, A,A.R.M. & Alhassan, N. 2014. Application of hot water and temperature treatments to improve the quality of Keitt and Nam Doc Mai mango fruits. *International Journal and Technology Research, 3: 262-266. [weblink]).*

[157] **Source**. Another member noted that under tables the references are sometimes referred to as "Source". Clarity was requested on how to use Source vs Reference. The TPDP noted the "Source" being appropriate for figures, but unclear in case of tables.

[158] **Primers and props tables**. The TPDP noted that it is still a question how to quote references when primers are presented in table format or when they are just part of the text.

[159] The TPDP:

(11) *agreed* that references are quoted directly under the tables and not at the end in the reference list.

7.5 TPDP Working procedures

[160] The IPPC secretariat initiated the discussion on the TPDP working procedures. The TPDP discussed that it would be beneficial to have one additional entomologist considering the TPDP workload increase on this discipline with the recent new DP submissions and noted that it would beneficial if the person also had experience in bacteriology and mycology. This would also allow for succession planning.

[161] Additionally, if there is an attempt to develop ISPMs, or other type of standards on horizontal issues, the TPDP would benefit from a second additional member.

[162] The TPDP also noted that commodity standard development and the APP might need a diagnostic capacity as well.

[163] The TPDP also noted the need for appropriate Secretariat resources to the TPDP panel and its work.

[164] The TPDP also commented that they felt that the presence of the TPDP Steward would allow better communication and would help to harmonize better the direction of the SC and the TPDP work.

[165] One TPDP member also noted that the DP notification period coinciding with the consultation period adds extra workload on countries having to provide comments and was inquiring if there was another solution, possibly moving the consultation period for DPs away from the ones for ISPMs. It was noted however that having 2 consultation periods for DPs is very beneficial in progressing the work programme and should be encouraged.

[166] The TPDP:

(12) *recommended* to call for an additional entomologist, possibly with expertise in bacteriology or mycology

(13) *consider* opening a call for an additional member for bacteriology for succession planning purposes and to account for the increased workload

(14) *agreed* to review their work programme to allow for succession planning and distribution of the workload

(15) *request* the SC's consideration of the timing of the consultation periods

(16) *recommended* to te SC having a second consultation period in 2024 December again.

7.6 Review of TPDP Instruction for Authors

[167] The TPDP noted that several suggestions and points are identified this week regarding the updates to the Instructions to authors, and agreed to assign Géraldine ANTHOINE as champion and agreed to dedicated virtual meeting was need to address the document in detail.

[168] The TPDP agreed to postpone discussion on the minimum controls for the proposed virtual meeting and go ahead with the current instructions for authors for the time being regarding the drafting of the DPs in the process.

[169] The TPDP:

(17) *agreed* that a dedicated virtual meeting was needed to address the document Instruction for Authors in detail.

7.7 SWOT analysis for the TPDP

[170] The IPPC secretariat introduced the process and gave a presentation on the SWOT analysis and invited the TPDP to share their ideas and feelings on potential ways to improve the TPDP workflow. The TPDP welcomed the opportunity, and discussed the following points.

[171] **Expert consultation**. The TPDP noted that the expert consultation is a long step that requires a full review of the DP and the TPDP suggested to review the cost-benefit of having this step in the process. They also noted that there are few requests to review the document, and noted that there could be better communication reaching out to experts possibly using communities of scientists as well, not only through NPPOs. One member queried if there was clear instructions provided for the experts reviewing the drafts during expert consultation.

[172] **E-decisions**. The TPDP noted that in some cases these online decisions are on small matters, sometimes they require more work. They noted that engagement in these forums are sometimes a little lacking, but that it is inspiring to see each others comments. The TPDP also noted the value of having these e-decisions and how these speed up processes allowing decision making on potentially long documents as well, that would otherwise require several virtual meetings.

[173] **Secretariat support**. The TPDP noted that the TPDP work increases with time, and Secretariat support has been reducing. Available resources and support staff can be a bottleneck in progressing the work program. The TPDP noted that at least one person with 100 % of their time dedicated to this panel would be beneficial.

[174] **Feedback on the use of DPs**. The TPDP discussed the uptake of DPs and how the IPPC protocols differ from EPPO protocols, and how having internationally approved protocols are beneficial. The TPDP noted the IPPC Observatory study on diagnostic protocols that is going to be published soon.

[175] **DP proposals**. It should be recognized and communicated that there is a limited capacity of the TPDP and the IPPC Secretariat and a should be highlighted that it is long process to adopt these, in order to manage the expectation of the submitters.

[176] **Access to appropriate expertise**. The TPDP noted that there maybe some way to motivate experts to participate in the drafting process. It was noted that recently the certificate of acknowledgement for drafters of adopted DPs have been discontinued.

[177] The TPDP:

(18) *agreed* to present to the SC the outcome of the SWOT analysis

7. 8 IPPC Standard setting procedure: potential adjustments to the development of DPs

[178] This agenda item was addressed under 7.5 TPDP Working procedures.

7. 9 Review of TPDP work plan: 2023-2025

[179] The TPDP reviewed their entire work programme. The discipline leads gave updates on the progress of each topic and the IPPC secretariat provided schedule and upcoming deadlines for the development of these DPs.

[180] The TPDP :

(19) *noted* the TPDP work programme;

(20) *agreed* with the tasks and deadlines proposed for the draft DPs;

(21) *agreed* to recommend to the SC to have two consultation periods.

8. Updates and Liaison

8.1 Update from the IPPC Secretariat

[181] The secretariat introduced the document, which provided a summary of accomplishments of the TPDP, updates on work of the SC.

[182] The TPDP :

(22) *noted* the updates in this paper.

8.2 EPPO and EUPHRESCO

[183] Ms Valérie GRIMAULT, the Assistant Director of the European and Mediterranean Plant Protection Organization (EPPO) provided a detailed update of the EPPO work programme related to diagnostic protocols, emphasizing the parallels with the work programme of the TPDP.

[184] Mr Baldiserra GIOVANI, the Euphresco Co-ordinator (EPPO) provided an update on the research coordination activities of the Euphresco project, that is aiming to coordinate research activities in line with the IPPC Strategyc Framewors development goal (DA XX: Research coordination).

[185] The TPDP :

(23) *thanked* Ms Valérie GRIMAULT and Mr Baldiserra GIOVANI for the presentations about EPPO and EUPHRESCO, respectively.

(24) *recommended* to invite Valerie GRIMAULT, the EPPO Assistant director to the next TPDP meeting as invited expert.

9. Any other business

[186] No other business was raised.

10. Recommendations to the Standards Committee (SC)

[187] Recommendation to the SC are described in previous sections of this report. To facilitate reference they are compiled below.

[188] The SC is invited to:

(1) *change* the title of Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031) in order remove the exclusion of PSTVd to: Pospiviroid species (2018-031);

(2) *approve* the draft DP for Pospiviroid species (2018-031) for consultation in 2024 with the adjustments agreed to at this meeting;

(3) *change* the title from *Heterobasidion annosum* (2021-015) to *Heterobasidion annosum* sensu lato (2021-015)

(4) *approve* the draft DP for *Heterobasidion annosum* sensu lato (2021-015) for consultation in 2024 with the adjustments agreed to at this meeting;

(5) *consider* and note the TPDP assessment and recommendations on the DP proposals from the 2023 IPPC Call for Topics: Standards and Implementation;

(6) *agree* to include in the TPDP work programme the following subjects:

- 2023-003: *Oryctes rhinoceros*, with priority 2
- 2023-009: HTS Identification of pure culture of phytopathogenic regulated bacteria isolated from plants, Annex to ISPM 27, with priority 2
- 2023-010: *Alopecurus myosuroides*, with priority 3
- 2023-012: *Halyomorpha halys*, with priority 1
- 2023-015: *Bactrocera correcta*, with priority 2
- 2023-016: *Bactrocera tsuneonis* and *Bactrocera minax*, with priority 2
- 2023-026: Avocado sun blotch viroid, with priority 1
- 2023-029: *Thaumatotibia leucotreta*, with priority 1

(7) *note* that the TPDP did not recommend the following subjects to be added into the TPDP work programme:

- 2023-011: Diagnostic Protocol for detection and identification of Xylella vectors
- 2023-017 DP: *Colletotrichum kahawae* J.M. Waller & Bridge
- 2023-025: DNA barcoding as an identification tool for regulated pests

(8) *note* that the TPDP will further reassess the DPs priorities, considering the existing DPs in the work programme;

(9) *consider* opening a call for new TPDP member for Entomology and, if agreed, request the IPPC secretariat to open the call.

(10) *remove* of this topic from the work programme, as it is low priority and only one author could be identified after several attempts for the DP *Moniliophthora roreri* (2019-005)

(11) *agree* to call for an additional entomologist, possibly with expertise in bacteriology or mycology

(12) *consider* adding an additional member for bacteriology for succession planning purposes and to account for the increased workload

(13) *consider* the timing of the consultation periods

(14) *approve* make a second consultation period for DPs permanent

(15) *note* the outcome of the SWOT analysis

(16) *agreed* have two consultation periods for DPs in 2024.

(17) *invite* Valerie GRIMAULT, the EPPO Assistant director to the next TPDP meeting as invited expert.

11. Closing of the meeting

[189] The TPDP thanked the secretariat staff for their professional support and dedication to the work.

[190] The secretariat thanked the participants for their active participation.

[191] The chairperson thanked the participants for their contributions and closed the meeting.

Appendix 1: Agenda

Agenda Item		Document No.	Presenter
1.	**Opening of the Meeting**		
1.1	Welcome by the IPPC Secretariat	--	IPPC Secretariat - Ms MOREIRA
1.2	Welcome by the host European and Mediterranean Plant Protection Organization (EPPO)	--	EPPO Secretariat - Ms GRIMAULT (EPPO Assistant Director)
2.	**Meeting Arrangements**		
2.1	Selection of Chairperson	--	MOREIRA
2.2	Selection of the Rapporteur	--	Chairperson
2.3	Adoption of the Agenda	01_TPDP_2023_Nov	Chairperson
3.	**Administrative Matters**		
3.1	Documents List	02_TPDP_2023_Nov	IPPC Secretariat – Ms KISS
3.2	Participants List / TPDP membership list	03_TPDP_2023_Nov TPDP membership list	KISS
3.3	Local arrangements	--	EPPO Secretariat
3.4	Review of the IPPC standard setting procedure	Link to video (PPT link)	KISS / MOREIRA
4.	**TPDP work programmee - Revisions and approval to the Standards Committee (SC) for consultation period in January 2024**		
4.1	Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031), priority 2 Discipline lead: Vessela MAVRODIEVA Referee: Julie PATTEMORE - Discipline lead notes - Referee's checklist	2018-031 31_TPDP_2023_Nov 27_TPDP_2023_Nov	MAVRODIEVA
4.2	*Heterobasidion annosum* (2021-015), priority 3 Discipline lead: Yazmin RIVERA Referee: Robert TAYLOR - Discipline lead notes - Referee's checklist	2021-015 30_TPDP_2023_Nov 21_REV_TPDP_2023_Nov	RIVERA
4.3	*Meloidogyne mali* (2018-019), priority 3 Discipline lead: Geraldine ANTHOINE Referee: Norman BARR - Discipline lead notes - Referee's checklist	2018-019 14_TPDP_2023_Nov 28_TPDP_2023_Nov	ANTHOINE
5.	**TPDP work programmee - Revision and approval to the Standards Committee (SC) for DP Notification period**		

Agenda Item		Document No.	Presenter
5.1	Revision of DP 27: *Ips* spp. (2021-004), priority 1 Discipline lead: Norman BARR Referee: Juliet GOLDSMITH - Compiled comments - Responses to compiled comments - Summary of major comments received	2021-004 25_TPDP_2023_Nov 23_TPDP_2023_Nov	BARR
5.2	Revision of DP 25: *Xylella fastidiosa* (2021-003), priority 2 Discipline lead: Robert TAYLOR Referee: - Compiled comments - Responses to compiled comments - Summary of major comments received	2021-003 24_TPDP_2023_Nov 22_TPDP_2023_Nov	TAYLOR
5.3	Revision of DP 09 - Genus *Anastrepha* Schiner (2021-002), priority 2 Discipline lead: Norman BARR Referee: Juliet GOLDSMITH - Compiled comments - Responses to compiled comments - Summary of major comments received	2021-002 (version submitted for consultation period) Link to compiled comments 29_TPDP_2023_Nov	BARR
6.	**TPDP Review of DPs proposals from the 2023 IPPC call for topics** - IPPC Task Force on Topics (TFT) first assessment on DPs proposals - Annex to ISPM 27 (Diagnostic protocols for regulated pests)	Link to 2023 topics submissions (zip file to be downloaded) 07_TPDP_2023_Nov	MOREIRA
6.1	2023-003 Developing Diagnostic Protocols for the Coconut Rhinoceros beetle (CRB): *Oryctes rhinoceros*	08_TPDP_2023_Nov	BARR / GOLDSMITH / ANTHOINE
6.2	2023-009 HTS Identification of regulated bacteria isolated from plants, Annex to ISPM 27 (Diagnostic protocols for regulated pests)	20_TPDP_2023_Nov	RIVERA / PATTEMORE / MAVRODIEVA
6.3	2023-010 *Alopecurus myosuroides*	09_TPDP_2023_Nov	ANTHOINE / BARR
6.4	2023-011 Diagnostic Protocol for detection and identification of Xylella vectors	18_TPDP_2023_Nov	BARR / GOLDSMITH / PATTEMORE
6.5	2023-012 Diagnostic Protocol for detection and identification of *Halyomorpha halys* (Brown Marmorated Stink Bug)	10_TPDP_2023_Nov	BARR / GOLDSMITH / PATTEMORE
6.6	2023-015 Diagnostic protocol for *Bactrocera correcta*	11_TPDP_2023_Nov	BARR / GOLDSMITH / ANTHOINE
6.7	2023-016 Diagnostic protocol for *Bactrocera tsuneonis* and *Bactrocera minax*	12_TPDP_2023_Nov	BARR / GOLDSMITH / ANTHOINE / APPIAH / ALL

Agenda Item		Document No.	Presenter
6.8	2023-017 DP: *Colletotrichum kahawae* J.M. Waller & Bridge	16_TPDP_2023_Nov	PATTEMORE / RIVERA / MAVRODIEVA
6.9	2023-025 DNA barcoding as an identification tool for regulated pests	19_TPDP_2023_Nov	MAVRODIEVA / ANTHOINE / ALL
6.10	2023-026 Diagnostic protocol for *Avocado sun blotch viroid*	17_TPDP_2023_Nov	APPIAH / MAVRODIEVA
6.11	2023-029 Diagnostic protocol for False Codling Moth: *Thaumatotibia leucotreta*	13_TPDP_2023_Nov	BARR / GOLDSMITH / MAVRODIEVA
7.	**TPDP work programme: Review of topics in the work programme**		
7.1	Update on draft DPs in the work programme	Link to List of topics for IPPC Standards Link to IPPC DPs drafting groups list	Chairperson / IPPC Secretariat
7.2	Selection of DP authors - Update on the TPDP procedures for DPs without drafting group - DP drafting groups selection of authors: ○ *Microcyclus ulei* (2019-003) ○ *Spodoptera frugiperda* (2021-016) ○ *Moniliophthora roreri* (2019-005)	26_TPDP_2023_Nov 04_TPDP_2023_Nov	BARR Chairperson / ALL
7.3	Quality assurance issues associated with diagnostic protocols for regulated pests	05_TPDP_2023_Nov	BARR
7.4	Updates on FAO and IPPC style guide	06_TPDP_2023_Nov	KISS
7.5	Review of TPDP working procedures	TPDP Working procedures Checklist for discipline leads and referees (work area page)	MOREIRA
7.6	Review of TPDP Instruction for Authors	32_TPDP_2023_Nov Link to Instruction to authors	MOREIRA
7.7	SWOT analysis for the TPDP	15_TPDP_2023_Nov	Chairperson / IPPC Secretariat
7.8	IPPC Standard setting procedure: potential adjustments to the development of DPs	--	PATTEMORE
7.9	Review of TPDP work plan: 2023-2025	(to be finalized at the meeting)	IPPC Secretariat
8.	**Updates and Liaison**		
8.1	Update from the IPPC Secretariat	33_TPDP_2023_Nov	MOREIRA
8.2	- EPPO - Euphresco	--	GRIMAULT / GIOVANI
9.	**Any other business**	--	Chairperson

Agenda Item		Document No.	Presenter
10.	**Recommendations to the Standards Committee (SC) or IPPC Secretariat**	--	IPPC Secretariat / Chairperson
11.	**Closing of the meeting**	--	IPPC Secretariat / Chairperson

Appendix 2: Documents list

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	POSTED
01_TPDP_2023_Nov	2.3	Agenda	2023-10-12 (1st version) 2023-10-26 (2nd version)
02_TPDP_2023_Nov	3.1	Documents list	2023-10-26
03_TPDP_2023_Nov	3.2	Participants list	2023-10-25
04_TPDP_2023_Nov	7.2	DP drafting groups selection of authors	2023-10-16
05_TPDP_2023_Nov	7.3	Quality assurance issues associated with diagnostic protocols for regulated pests	2023-10-16
06_TPDP_2023_Nov	7.4	Updates on FAO and IPPC style guide	2023-10-16
07_TPDP_2023_Nov	6	IPPC Task Force on Topics (TFT) first assessment on DPs proposals - Annex to ISPM 27 (Diagnostic protocols for regulated pests)	2023-10-16
08_TPDP_2023_Nov	6.1	2023-003 Developing Diagnostic Protocols for the Coconut Rhinoceros beetle (CRB): *Oryctes rhinoceros*	2023-10-20
09_TPDP_2023_Nov	6.3	2023-010 *Alopecurus myosuroides*	2023-10-20
10_TPDP_2023_Nov	6.5	2023-012 Diagnostic Protocol for detection and identification of *Halyomorpha halys* (Brown Marmorated Stink Bug)	2023-10-20
11_TPDP_2023_Nov	6.6	2023-015 Diagnostic protocol for *Bactrocera correcta*	2023-10-20
12_TPDP_2023_Nov	6.7	2023-016 Diagnostic protocol for *Bactrocera tsuneonis* and *Bactrocera minax*	2023-10-20
13_TPDP_2023_Nov	6.11	2023-029 Diagnostic protocol for False Codling Moth: *Thaumatotibia leucotreta*	2023-10-20
14_TPDP_2023_Nov	4.3	*Meloidogyne mali* (2018-019), priority 3, Discipline lead notes	2023-10-20
15_TPDP_2023_Nov	7.6	SWOT analysis for the TPDP	2023-10-20
16_TPDP_2023_Nov	6.8	2023-017 DP: *Colletotrichum kahawae* J.M. Waller & Bridge	2023-10-24
17_TPDP_2023_Nov	6.10	2023-026 Diagnostic protocol for *Avocado sun blotch viroid*	2023-10-24
18_TPDP_2023_Nov	6.4	2023-011 Diagnostic Protocol for detection and identification of Xylella vectors	2023-10-24
19_TPDP_2023_Nov	6.9	2023-025 DNA barcoding as an identification tool for regulated pests	2023-10-24

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	POSTED
20_TPDP_2023_Nov	6.2	2023-009 HTS Identification of regulated bacteria isolated from plants, Annex to ISPM 27 (Diagnostic protocols for regulated pests)	2023-10-24
21_REV_TPDP_2023_Nov	4.2	*Heterobasidion annosum* sensu lato (2021-015) – Referee Checklist	2023-10-26
22_TPDP_2023_Nov	5.2	Revision of DP 25: *Xylella fastidiosa* (2021-003) - Summary of major comments received	2023-10-24
23_TPDP_2023_Nov	5.1	Revision of DP 27: *Ips* spp. (2021-004) – Summary of major comments received	2023-10-24
24_TPDP_2023_Nov	5.2	Revision of DP 25: *Xylella fastidiosa* (2021-003) – Response to compiled comments	2023-10-24
25_TPDP_2023_Nov	5.1	Revision of DP 27: *Ips* spp. (2021-004) – Response to compiled comments	2023-10-24
26_TPDP_2023_Nov	7.2	Update on the TPDP procedures for DPs without drafting group	2023-10-25
27_TPDP_2023_Nov	4.1	Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031) – Referee's Checklist	2023-10-25
28_TPDP_2023_Nov	4.3	*Meloidogyne mali* (2018-019) – Referee's Checklist	2023-10-26
29_TPDP_2023_Nov	5.3	Revision of DP 09 - Genus *Anastrepha* Schiner (2021-002) - Summary of major comments received	2023-10-26
30_TPDP_2023_Nov	4.2	*Heterobasidion annosum* sensu lato (2021-015) - Discipline lead notes	2023-10-26
31_TPDP_2023_Nov	4.1	Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031) - Discipline lead notes	
32_TPDP_2023_Nov	7.6	Review of TPDP Instruction for Authors	
33_TPDP_2023_Nov	8.1	Update from the IPPC Secretariat	

List of draft DPs

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	POSTED
2018-031	4.1	Pospiviroid species (except Potato spindle tuber viroid (DP 7)) (2018-031), priority 2	2023-10-26
2021-015	4.2	*Heterobasidion annosum* sensu lato (2021-015), priority 3	2023-10-24
2018-019	4.3	*Meloidogyne mali* (2018-019), priority 3	2023-10-26
2021-004	5.1	Revision of DP 27: *Ips* spp. (2021-004) priority1	2023-10-26
2021-003	5.2	Revision of DP 25: *Xylella fastidiosa* (2021-003), priority 2	2023-10-24

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	POSTED
2021-002	5.3	Revision of DP 09: Genus *Anastrepha* (2021-002), priority 2	
2023 -003	6.1	2023-003 Developing Diagnostic Protocols for the Coconut Rhinoceros beetle (CRB): *Oryctes rhinoceros*	2023-10-20
2023-009	6.2	2023-009 HTS Identification of regulated bacteria isolated from plants, Annex to ISPM 27 (Diagnostic protocols for regulated pests)	2023-10-24
2023-010	6.3	2023-010 *Alopecurus myosuroides*	2023-10-20
2023-011	6.4	2023-011 Diagnostic Protocol for detection and identification of Xylella vectors	2023-10-24
2023-012	6.5	2023-012 Diagnostic Protocol for detection and identification of *Halyomorpha halys* (Brown Marmorated Stink Bug)	2023-10-20
2023-015	6.6	2023-015 Diagnostic protocol for *Bactrocera correcta*	2023-10-20
2023-016	6.7	2023-016 Diagnostic protocol for *Bactrocera tsuneonis* and *Bactrocera minax*	2023-10-20
2023-017	6.8	2023-017 DP: *Colletotrichum kahawae* J.M. Waller & Bridge	2023-10-24
2023-025	6.9	2023-025 DNA barcoding as an identification tool for regulated pests	2023-10-24
2023-026	6.10	2023-026 Diagnostic protocol for *Avocado sun blotch viroid*	2023-10-24
2023-029	6.11	2023-029 Diagnostic protocol for False Codling Moth: *Thaumatotibia leucotreta*	2023-10-20

Documents links (presented in the order of the agenda items)

Links	AGENDA ITEM	DOCUMENT LINK
TPDP Membership list	3.2	TPDP membership list
Review of the IPPC standard setting procedure	3.4	Link to video (PPT link)
Revision of DP 27: Ips spp. (2021-004), priority 1	5.1	Compiled comments
Revision of DP 25: Xylella fastidiosa (2021-003), priority 2	5.2	Compiled comments
Revision of DP 09 - Genus Anastrepha Schiner (2021-002), priority 2	5.3	Compiled comments
TPDP Review of DPs proposals from the 2023 IPPC call for topics	6	Link to 2023 topics submissions

Links	AGENDA ITEM	DOCUMENT LINK
Update on draft DPs in the work programme	7.1	Link to List of topics for IPPC Standards
Review of TPDP working procedures	7.5	TPDP Working procedures Checklist for discipline leads and referees
Review of TPDP Instruction for Authors	7.6	Link to Instruction to authors

Additional resources

- IPPC standard setting procedure: video
- Link to adopted ISPMs
- IPPC Strategic Framework 2020-2030
- Link to SC meeting reports
- IPPC procedure manual for standard setting: https://www.ippc.int/en/core-activities/ippc-standard-setting-procedure-manual/
- IPPC style guide: https://www.ippc.int/en/publications/81329/
- Standard setting main page: https://www.ippc.int/en/core-activities/standards-setting/
- TPDP main page: https://www.ippc.int/en/core-activities/standards-setting/expert-drafting-groups/technical-panels/technical-panel-diagnostic-protocols/

Appendix 3: Participants list

Presence	Participant role	Name, mailing, address, telephone	Email address	Term begins	Term ends
	Steward	**Mr Álvaro SEPÚLVEDA LUQUE** Servicio Agrícola y Ganadero División de Protección Agrícola y Forestal Av. Presidente Bulnes 140, 4th floor, Santiago, **CHILE** Tel: + 56-2 234 5120	alvaro.sepulveda@sag.gob.cl		
✓	Bacteriology, and backup for mycology	**Mr Robert TAYLOR** Plant Health & Environment Laboratory New Zealand Ministry for Primary Industries 231 Morrin Road St Johns PO Box 2095 Auckland 1140 **New Zealand** Tel: (+64) 9 909 3548 Fax: (+64) 9 909 5739	Robert.Taylor@mpi.govt.nz	May 2011	May 2026 (3rd term)
✓	Entomology	**Mr Norman B. BARR** Assistant Director Mission Laboratory 22675 N. Moorefiled Rd. Moore Air Base Bldg. S-6414 Edinburg, TX 78541 **USA** Tel. (+1) 956 205 7658 Fax: (+1) 956 205 7680	Norman.B.Barr@aphis.usda.gov	July 2012	July 2027 (3nd term)
✓	Entomology	**Ms Juliet GOLDSMITH** Plant Health Specialist Caribbean Agricultural Health and Food Agency (CAHFSA) Letitia Vriesdelaan 10 Paramaribo **SURINAME** Tel: (+597) 422 546 Mobile: (+597) 725 2922	Juliet.goldsmith@cahfsa.org	November 2014	November 2024 (2nd term)
✓	Nematology	**Ms Géraldine ANTHOINE** Directrice adjointe / Deputy head Chef d'unité coordination de la référence / Head of unit "coordination of reference activities" 7 rue Jean Dixméras 49044 ANGERS cedex 01 **France** Tel: (33) 241207431 Fax: (33) 240207430	geraldine.anthoine@anses.fr	April 2009	April 2024 (3rd term)
✓	Virology	**Ms Vessela Assenova MAVRODIEVA** Assistant Laboratory Director, USDA APHIS, PPQ, Beltsville, MD, **USA** Tel: (+1) 301-313-9208	vessela.a.mavrodieva@usda.gov	March 2020	March 2025 (1st term)

Presence	Participant role	Name, mailing, address, telephone	Email address	Term begins	Term ends
✓	Virology	**Mr Andrew Sarkodie APPIAH** Senior Research Scientist, Biotechnology and Nuclear Agriculture Research Institute, Ghana Atomic Energy Commission P. O. Box LG 80, Legon, Accra **GHANA** Tel: +233 249166128	andysark2000@gmail.com andrew.appiah@gaec.gov.gh	November 2022	November 2027 (1st term)
✓	Mycology	**Ms Julie PATTEMORE** Assistant Director: Plant Pathology, Department of Agriculture, Water and the Environment, Melbourne, **AUSTRALIA** Tel: (+61) 3 83186957	julie.pattemore@awe.gov.au	March 2020	March 2025 (1st term)
✓	Mycology	**Ms Yazmin Rivera RIVERA** Molecular Biologist, USDA APHIS, PPQ, Beltsville, MD, **USA** Tel: (+1) 301-313-9273	Yazmin.Rivera@usda.gov	March 2020	March 2025 (1st term)
	Botanist	**Mr Vijayasankar RAMAN** Botanist, National Identification Services, APHIS USDA, Beltsville, MD-20705, **USA** Tel: +13013139332 **USA**	vijay.raman@usda.gov	October 2023	October 2028 (1st term)

Other participants			
✓	Host - RPPO	**Ms Valérie GRIMAULT** Assistant Director European and Mediterranean Plant Protection Organization **(EPPO)** 21 Boulevard Richard Lenoir 75011 Paris **FRANCE**	valerie.grimault@eppo.int
✓	Host - RPPO	**Mr Charlotte TRONTIN** Scientific Officer European and Mediterranean Plant Protection Organization **(EPPO)** 21 Boulevard Richard Lenoir 75011 Paris **FRANCE**	ct@eppo.int
✓	Host - RPPO	**Mr Baldiserra GIOVANI** Euphresco Co-ordinator European and Mediterranean Plant Protection Organization **(EPPO)** 21 Boulevard Richard Lenoir 75011 Paris **FRANCE**	bg@eppo.int
✓	IPPC Secretariat Coordinator for TPDP	**Ms Adriana G. MOREIRA** Deputy Lead of the Standard Setting Unit Standard Setting Officer (Programme Specialist) International Plant Protection Convention Secretariat **(IPPC)** Food and Agriculture Organization of the United Nations **(FAO/UN)** Viale delle Terme di Caracalla 00153 Rome, Italy Phone: + 39 06 570 55 809	Adriana.Moreira@fao.org
✓	IPPC Secretariat Assistant for TPDP	**Ms Janka KISS** Phytosanitary Specialist International Plant Protection Convention Secretariat **(IPPC)** Food and Agriculture Organization of the United Nations **(FAO/UN)** Viale delle Terme di Caracalla 00153 Rome, Italy (Current;y outposted in Budabest, Hungary)	Janka.Kiss@fao.org