



REPORT

Technical Panel on Diagnostic Protocols November 2015

Virtual Meeting
04 November



Food and Agriculture Organization of the United Nation

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1. Opening of the meeting

[1] The International Plant Protection Convention (IPPC) Secretariat lead for the Technical Panel on Diagnostic Protocols (TPDP) chaired the meeting and welcomed the following participants:

1. Ms Géraldine ANTHOINE
2. Mr Norman B. BARR
3. Ms Jane CHARD
4. Ms Juliet GOLDSMITH
5. Mr Johannes de GRUYTER
6. Mr Delano JAMES
7. Mr Robert TAYLOR
8. Ms Adriana G. MOREIRA (IPPC Secretariat lead)
9. Mr Martin FARREN (IPPC Secretariat support)

[2] The full list of TPDP members and their contact details can be found on the International Phytosanitary Portal (IPP)¹.

[3] The Secretariat reminded the participants of the use of the Adobe Connect tool.

[4] The Secretariat introduced the agenda and it was adopted as presented in Appendix 1 of this report.

Election of rapporteur

[5] Ms Géraldine ANTHOINE was elected as the rapporteur.

2. TPDP work programme

Challenges and the importance of the TPDP work

[6] The TPDP Steward introduced this paper² which had been agreed to at the last TPDP June 2015 meeting³. The panel had discussed the future goals of its five year plan. Most of the diagnostic protocols (DPs) on the list of topics for IPPC standards will be adopted in the next 3 years and therefore the panel needs to consider their medium term plan. The steward acknowledged the work and commitment by panel members as well as the authors in charge of the development of DPs. During the discussion of the paper, it was noted that the Secretariat's human resources to coordinate the panel's work might face constraints in dealing with the high volume of DPs being processed.

[7] The IPPC Implementation Review and Support System (IRSS) published the results of a survey⁴ on the implementation of ISPM 17 (*Pest reporting*) and ISPM 19 (*Guidelines on lists of regulated pests*) which was conducted in 2014. The panel had previously discussed these results when developing the TPDP's strengths, weaknesses, opportunities and threats ("SWOT analysis") table in 2014⁵. In this IRSS survey, countries were asked to list the five pests of most concern. It was noted that there are inherent issues in creating such lists, for example: not all IPPC contracting parties responded to the questionnaire; importance may change rapidly as new pests occur; there is no information on the status of these pests; and IPPC contracting parties were not asked to provide the five pests for which DPs are

¹ TPDP membership list: <https://www.ippc.int/core-activities/standards-setting/expert-drafting-groups/technical-panels/technical-panel-diagnostic-protocols>

² 05_TPDP_2015_Nov

³ TPDP June 2015 meeting report: <https://www.ippc.int/en/publications/81330/>

⁴ IRSS survey report (ISPM 17 and ISPM 19): <https://www.ippc.int/largefiles/2014/Survey-Analysis-NPPOs-17-19.pdf>

⁵ 2014 July TPDP Meeting Report: <https://www.ippc.int/en/publications/2579/>

required. However, it was pointed out that, from this IRSS survey, at least 16 of the pests listed by IPPC contracting parties as the pests of most concern are covered by adopted DPs or DPs under development.

- [8] The panel discussed the ongoing need to develop DPs and their usefulness. It was highlighted that the TPDP and the scientific community play an essential role in assisting countries dealing with various pests and of course, with the development of DPs. Harmonized DPs are highly beneficial and help meet the needs and demands of the IPPC community. The importance of international co-operation for DPs is crucial to ensure well developed DPs. The panel highlighted the importance of networking with experts from various disciplines, which helps to diversify the protocols and improve their quality.
- [9] It was noted that a questionnaire to seek views on the utility of DPs and the needs of contracting parties was developed and put on hold in 2014 by the Standards Committee (SC) until sufficient DPs had been adopted. It was also noted that such a questionnaire would help gather crucial feedback from IPPC contracting parties on the use of DPs, this would be useful for the TPDP to consider future endeavors.
- [10] The panel agreed that a major priority will be to review adopted DPs, as this is a task (task 5) in the TPDP Specification⁶. The panel stressed that there was also a need to update publications (literature references) and modernize the DPs with the latest technology applicable as it is imperative that DPs do not become outdated.
- [11] The panel raised the possibility of developing research papers, which could go hand in hand with the work carried out in relation to DPs. The panel suggested that these papers could be established alongside the development of DPs with the aim of detecting and identifying potential operational and technical implementation issues and improving the development of DPs. Research papers developed by the TPDP should be endorsed by the SC and in the end will ensure more transparency. It was noted that this could be considered in the TPDP specification tasks 8 and 11 but would have to be under the direction of the SC.
- [12] Some members expressed concerns on how the development of these papers would affect the current workload of the panel with the development of draft DPs. The Secretariat acknowledged the considerable amount of work currently undertaken by the panel. However, some issues regarding the operation and technical implementation of DPs had already been identified by the panel in previous meetings, such as more horizontal DPs (e.g. on a specific crop or commodity), or the detection of the viability of pests by molecular methods, identification of pests based on sequences (if a single gene or next generation sequence) and taxonomic issues and its implication for the pest diagnosis (e.g. *Bactrocera dorsalis* complex). The panel agreed that it was too premature to make conclusions or recommendations to the SC on this type of work, as it had been agreed that further discussions by the TPDP would be needed at the next TPDP face to face meeting to ensure important issues are addressed.
- [13] It was also agreed that, for the next TPDP face to face meeting, each discipline lead would review the published DPs under their area of responsibility and identify which DPs need to be updated.

Proposal of adjustment to scope: Tephritidae: Identification of immature stages of fruit flies of economic importance by molecular techniques (2006-028)

- [14] The lead author and TPDP member introduced the paper⁷ highlighting that this draft DP is currently in “pending status” due the lack of validated and verified data on molecular methods for identification of fruit fly larvae. The issues needing consideration by the TPDP prior to restarting drafting of this protocol concern its scope, practicality, and format. It was pointed out that the drafting of this DP is difficult in terms of the sheer volume of species associated with the Tephritidae family, which is near

⁶ Specification TP 1 - Technical Panel on Diagnostic Protocols: <https://www.ippc.int/en/publications/1297/>

⁷ 04_TPDP_2015_Nov

5,000 species of which 100-200 are classified as pests or of economic significance. The lead author raised other points of how this draft should be developed further.

[15] The panel agreed that the content of the draft DP should be consistent with existing methods for the adopted DP 9 on Genus *Anastrepha*⁸ and the draft DP on *Bactrocera* (2006-026)⁹, and that the new scope should not be limited to one methodology of identification, i.e. molecular methods. This is because there are many molecular studies that examine diagnostic capabilities for fruit flies but these are not all validated or verified, or used routinely. The use of host records for fruit fly identification is often included in the interpretation of results in a DP and would require documentation. This documentation requires systematic verification and regular updating, which represents a huge task for a taxonomic family, which comprises about 5,000 species. It was stressed that focusing the draft DP on a more limited taxonomic group of fruit flies would make it easier to address these limitations of methods, thus its implementation.

[16] The panel agreed to the following scope changes:

- (1) To reduce the scope of the target pest from fruit flies in the Tephritidae family to fruit flies in the Genus *Ceratitis* (*Ceratitis* spp.) because this genus includes many fruit flies of economic significance and are pests of concern (and also appeared in the IRSS survey mentioned above);
- (2) To include all life stages (from immature to adult) to be consistent with existing methods and adopted or draft DPs, and to provide more options for identification of immature stages when difficulties in using certain methodologies are encountered;
- (3) To include several types of methods, not only molecular, because up to now, not all molecular methods available were verified or are used routinely, and morphological methods are commonly used.

[17] Based on the above discussions and justifications, the TPDP agreed to present this paper as a background paper to the SC to support the request to the SC to consider the change the title and scope of this DP from “Tephritidae: Identification of immature stages of fruit flies of economic importance by molecular techniques (2006-028)” to “Genus *Ceratitis* (2006-028)”.

2.3 Reports on individual DPs status by discipline leads (status of protocols)

[18] The Secretariat and the panel discussed the general updates¹⁰ of the DPs, which are currently being processed. The panel was made aware of the three draft DPs which are currently under SC e-decision for approval for adoption (DP Notification period starting on 15 December 2015): *Xiphinema americanum sensu lato* (2004-025), Phytoplasmas (2004-018) and *Bursaphelenchus xylophilus* (2004-016).

[19] The IPPC 2015 Call for topics¹¹, which closed on 14 August, has had no new proposals for diagnosis protocols.

3. Other Business

[20] No other business was discussed.

4. Closing of the meeting

[21] The Secretariat thanked the panel members for their work and participation in the meeting and closed the meeting.

⁸ DP 09: Genus *Anastrepha* Schiner

⁹ *Bactrocera dorsalis* complex (2006-026)

¹⁰ 03_TPDP_2015_Nov

¹¹ IPPC Call for topics: <https://www.ippc.int/en/core-activities/calls-topics/>

APPENDIX 1 - Agenda**2015 NOVEMBER VIRTUAL MEETING OF THE TECHNICAL PANEL ON
DIAGNOSTIC PROTOCOLS****04 November 2015****Time:** 18:00 - 20:00 (GMT+1)

Adobe Connect

AGENDA

AGENDA ITEM	DOCUMENT NO.	PRESENTER
1. Opening of the meeting		
<ul style="list-style-type: none"> • Welcome by the IPPC Secretariat and introductions • Adoption of the agenda and election of rapporteur 	02_TPDP_2015_Nov 01_TPDP_2015_Nov	MOREIRA / ALL
2. TPDP work programme		
❖ Challenges and the importance of the TPDP work	05_TPDP_2015_Nov	CHARD
❖ Proposal of adjustment to scope: Tephritidae: Identification of immature stages of fruit flies of economic importance by molecular techniques (2006-028)	04_TPDP_2015_Nov	BARR
❖ Reports on individual DPs status by discipline leads (status of protocols)	03_TPDP_2015_Nov	ALL
3. Other Business	-	MOREIRA
4. Closure of the meeting	-	MOREIRA