



***REPORT***

Virtual Meeting  
26 May 2015

# **Technical Panel on Phytosanitary Treatments May, 2015**



**Food and Agriculture Organization of the United Nations**

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## 1. Opening of the meeting

- [1] The IPPC Secretariat (hereafter Secretariat) welcomed the participants to the meeting. The following TPPT members participated in the meeting: Mr Eduardo WILLINK (Argentina), Mr Glenn BOWMAN (Australia), Mr Matthew SMYTH (Australia), Mr Yuejin WANG (China), Mr Daojian YU (China), Mr Toshiyuki DOHINO (Japan), Mr Michael ORMSBY (New Zealand), Mr Scott MYERS (USA) and Mr Guy HALLMAN (USA). In attendance were also Mr Bart ROSSEL (TPPT Steward, Australia) and Mr Andrew PARKER (Invited Expert, International Atomic Energy Agency (IAEA)). In addition the following two IPPC Secretariat staff attended: Mr Brent LARSON and Mr Nuri NIYAZI.
- [2] The Secretariat especially welcomed Mr Toshiyuki DOHINO (Japan) as the newest member to the Technical Panel on Phytosanitary Treatments (TPPT) and wished him best of success in his work on the Panel.
- [3] The full list of TPPT members and their contact details can be found on the International Phytosanitary Portal (IPP)<sup>1</sup>.
- [4] The Secretariat gave a brief explanation of the use of the Adobe Connect tool.
- [5] Mr Nuri NIYAZI (IPPC Secretariat) took on the role of Chair and introduced the agenda and it was adopted as presented in Appendix 1 of this report.

### Election of rapporteur

- [6] Mr Michael ORMSBY was elected as the rapporteur.

## 2. IPPC Secretariat Updates

### Update from the Tenth Session of the Commission on Phytosanitary Measures

- [7] The Secretariat provided an update from the Tenth Session of the Commission on Phytosanitary Measures (CPM-10) held in March 2015. The following four phytosanitary treatments (PTs) were adopted by CPM-10 (2015):
1. Cold treatment for *Bactrocera tryoni* on *Citrus sinensis* (2007-206E)
  2. Cold treatment for *Bactrocera tryoni* on *Citrus reticulata* x *C. sinensis* (2007-206F)
  3. Cold treatment for *Bactrocera tryoni* on *Citrus limon* (2007-206G)
  4. Irradiation treatment for *Dysmicoccus neobrevipes*, *Planococcus lilacinus* and *P. minor* (2012-011)
- [8] Although the SC (in its November 2014 meeting<sup>2</sup>) forwarded the above three cold treatments to CPM for adoption by vote, the CPM decided it did not want to vote on the adoption of ISPMs and decided to adopt these treatments by consensus.
- [9] The Secretariat updated the meeting participants on the adoption by CPM-10 of a relevant change to the List of topics for IPPC standards (LOT), namely the splitting of the TPPT subject “Sulphuryl fluoride fumigation of wood packaging material (2007-101)” into the following two TPPT treatments: “Sulphuryl fluoride fumigation of insects in debarked wood (2007-101A)” and “Sulphuryl fluoride fumigation of nematodes and insects in debarked wood (2007-101B)” (see the TPPT February 2015 virtual meeting report<sup>3</sup> for further information).

<sup>1</sup> TPPT membership list: <https://www.ippc.int/en/core-activities/standards-setting/expert-drafting-groups/technical-panels/technical-panel-phytosanitary-treatments/#secretariat>

<sup>2</sup> SC November 2014 meeting report: <https://www.ippc.int/en/core-activities/standards-setting/standards-committee/>

<sup>3</sup> TPPT February 2015 virtual meeting report: <https://www.ippc.int/en/publications/80998/>

- [10] Further, relating to the work of the Technical Panel of Forest Quarantine (TPFQ), it was noted that CPM-10 (2015) adopted the topic “Revision of dielectric heating section: Annex 1 (Approved phytosanitary treatments associated with wood packaging material) to ISPM 15: Regulation of wood packaging material in international trade”.
- [11] Lastly, the Secretariat informed the TPPT members that a CPM-10 (2015) Side Session was conducted by the Secretariat on the outcomes of the “Expert consultation on phytosanitary treatments for *Bactrocera dorsalis* complex”<sup>4,5</sup>, which had been held in December 2014 in Okinawa, Japan. The side session was attended by some 40 participants who received an overview of the discussion held at the expert consultation with regard to the implications of the synonymization of four *Bactrocera* fruit fly pests and issues in the design, conduct, operationalization, evaluation and data presentation for phytosanitary treatment research in species in the *B. dorsalis* complex.

### Update from Standards Committee 2015 May meeting

- [12] The Secretariat provided an update from the Standards Committee (SC) 2015 May meeting<sup>6</sup>. The SC approved the following drafts revision of ISPMs for member consultation: “Revision of dielectric heating section (Annex 1 (Approved treatments associated with wood packaging material) to ISPM 15 (Regulation of wood packaging material in international trade) (2006-010B); and “Inclusion of the Phytosanitary treatment *Sulphuryl fluoride fumigation of wood packaging material* (2006-010A) in annexes 1 and 2 of ISPM 15”.
- [13] The SC approved the draft specification “Requirements for the use of phytosanitary treatments as phytosanitary measures (2014-008)” after reviewing the comments from member consultation and tasked the TPPT with developing the according draft ISPMs on requirements for fumigation treatments (2014-004), temperature treatments (2014-005), modified atmosphere treatments (2014-006), chemical treatments (2014-003) and irradiation treatments (revision to ISPM 18) (2014-007).
- [14] In relation with the TPPT update that was presented to the SC, the Secretariat highlighted the following SC decisions that were taken at is 2015 May meeting; the SC:
- extended the membership of the following three TPPT members for another 5-year term (i.e. from 2015 until 2020) and thanked the contracting parties for their support to the TPPT:
    - Mr Eduardo WILLINK (Argentina)
    - Mr Yuejin WANG (China)
    - Mr Michael ORMSBY (New Zealand).
  - noted the reports of the following TPPT meetings held between May 2014 and April 2015:
    - TPPT face-to-face meeting, 23-27 June 2014 (Bali, Indonesia)
    - TPPT virtual meetings of 25 September 2014 and 17 February 2015.
  - strongly supported the TPPT request for a call for treatments but agreed that due to resource constraints and current priorities for standard setting there should not be a call for treatments in 2015 and that the issue would be discussed further in the SC November 2015 meeting.
  - noted that the TPPT selected Mr Guy HALLMAN (USA) to act as liaison between the TPPT and the Phytosanitary Temperature Treatments Expert Group to exchange information on the research of temperature treatments to help support the development of international phytosanitary treatments.

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<sup>4</sup> Summary of the CPM-10 Side Session “Expert consultation on phytosanitary treatments for *Bactrocera dorsalis* complex”: <http://www.phytosanitary.info/activity/cpm-10-side-session-expert-consultation-phytosanitary-treatments-bactrocera-dorsalis>

<sup>5</sup> “Expert consultation on phytosanitary treatments for *Bactrocera dorsalis* complex” meeting report: <https://www.ippc.int/en/publications/2702/>

<sup>6</sup> SC May 2015 meeting report: <https://www.ippc.int/en/core-activities/standards-setting/standards-committee/>

- removed the draft phytosanitary treatment “Vapour heat treatment for *Mangifera indica* var. Manila Super” (2009-108) from the List of topics for IPPC standards owing to non-receipt of requested additional information.
- noted the modifications to the “Working TPPT criteria for treatment evaluation” as incorporated in the latest update of the IPPC Standard Setting Procedure Manual and asked that it be updated to match SC decisions made by the SC in May 2015; with regard to the use of historical data to support a draft phytosanitary treatment, the SC decided that the TPPT is to seek guidance from the SC before evaluating the according treatment submission.
- noted the following documents produced by the TPPT in recent years for inclusion in the “Working TPPT criteria for treatment evaluation”:
  - “Most thermotolerant stage of Tephritidae”
  - “Presence of live adult insects after irradiation phytosanitary treatment”
  - Characterization of heated air treatments”
- noted the document “TPPT recommendations for future research on high temperature forced air treatment” and requested the Secretariat to append it to the report of the 2015 February TPPT virtual meeting.
- agreed to the use of the text proposed in the document “Technical support document for definition of effective dose” to describe the level of efficacy achieved by a treatment schedule, agreed that the TPPT should present ink amendments presenting the proposed changes to the standards for consideration by SC November 2015, and removed the term “effective dose” (2013-017) from the List of topics for IPPC standards.
- considering the high volume of future work of the TPPT, agreed that the TPPT Assistant-steward be invited to the TPPT meetings, including the 2015 face-to-face meeting.

### 3. TPPT Work Programme

#### Overview of status of TPPT treatment portfolio

[15] The Secretariat provided an overview of the TPPT portfolio of draft phytosanitary treatments, currently totaling 15 draft phytosanitary treatments (PTs) at various stages of development along the standard setting process:

- The following six PTs underwent member consultation in 2014 and are currently under review by the TPPT:
  1. High-temperature forced air treatment for *Bactrocera melanotus* and *B. xanthodes* on papaya (2009-105)
  2. Vapour heat treatment for *Carica papaya* Solo (2009-109)
  3. Cold treatment for *Ceratitis capitata* on *Citrus clementina* var. Clemenules (2010-102)
  4. Cold treatment for *Ceratitis capitata* on *Citrus sinensis* var. Navel and Valencia (2010-103)
  5. Vapour heat treatment for *Ceratitis capitata* in *Mangifera indica* (2010-106)
  6. Irradiation treatment for *Ostrinia nubilalis* (2012-009)
- The following four PTs will undergo member consultation in 2015:
  1. Sulphuryl fluoride fumigation of insects in debarked wood (2007-101A)
  2. Sulphuryl fluoride fumigation of nematodes and insects in debarked wood (2007-101B)
  3. Heat treatment of wood using dielectric heating (2007-114)

#### 4. Vapour heat treatment for *Bactrocera tryoni* on *Mangifera indica* (2010-107)

- The following five PTs are on hold pending further analysis of possible intra-species differences in treatment response (see discussion on 2010-102 and 103 below for further details):
  1. Cold treatment for *Ceratitis capitata* on *Citrus sinensis* (2007-206A)
  2. Cold treatment for *Ceratitis capitata* on *Citrus reticulata* x *C. sinensis* (2007-206B)
  3. Cold treatment for *Ceratitis capitata* on *Citrus limon* (2007-206C)
  4. Cold treatment for *Ceratitis capitata* on *Citrus paradisi* (2007-210)
  5. Cold treatment for *Ceratitis capitata* on *Citrus reticulata* cultivars and hybrids (2007-212)

### Review of member consultation comments on six draft phytosanitary treatments (PTs)

#### Vapour heat treatment for *Carica papaya* Solo (2009-109)

- [16] The TPPT treatment lead explained that most member comments were easily addressed in the draft TPPT responses and did not require discussion. He noted, however, that one comment pointed to studies submitted by exporting countries which may indicate possible fruit fly population differences in heat tolerance and treatment response. In view of this information the TPPT decided to place this draft PT on hold, pending receipt and review of the additional studies noted in the member comments.
- [17] A further point discussed by the TPPT was the level of evidence required to demonstrate the validity of assumptions made in the experimental design—specifically, in the case of this draft PT, the selection of the most heat-tolerant life stage of the target pest in the specific regulated article. One member questioned whether additional evidence was needed when studies establish the most tolerant life stage in other fruit commodities, while another member pointed to existing literature identifying eggs as the most heat-tolerant life stage in *Bactrocera dorsalis* (Armstrong et al, 1989) and this reference could be added to the draft PT. It was decided to re-discuss the issue of data requirements for testing assumptions in experimental design at the next TPPT face-to-face meeting.
- [18] The TPPT:
- (1) *agreed* to place on hold the review of the draft PT “Vapour heat treatment for *Carica papaya* Solo” (2009-109) pending receipt and review of additional studies.

#### Vapour heat treatment for *Ceratitis capitata* in *Mangifera indica* (2010-106)

- [19] The TPPT treatment lead introduced the paper. He explained that all member comments were easily addressed in the draft TPPT responses and did not require discussion, except a similar comment as discussed above (2009-109) and a similar approach should be taken.
- [20] The TPPT:
- (2) *agreed* to place on hold the review of the draft PT “Vapour heat treatment for *Carica papaya* Solo” (2009-109) pending receipt and review of review of additional studies.

#### Cold treatments for *Ceratitis capitata* on *Citrus clementina* var. *Clemenules* (2010-102) and on *Citrus sinensis* var. *Navel* and *Valencia* (2010-103)

- [21] The TPPT treatment leads introduced the documents and it was noted that in the member comments similar concerns were voiced as for the set of five cold treatments for *Ceratitis capitata* currently on hold pending further analysis of possible intra-species differences in treatment response (see section ‘Overview of status of TPPT treatment portfolio’ above). The TPPT decided to place these two cold treatments on hold, to be reviewed together with the other five cold treatments as soon as further data is available from the comparative studies on cold treatment response in different *C. capitata* populations currently undertaken by the Joint FAO/IAEA Division of Nuclear Techniques in

Agriculture at the laboratories in Seibersdorf, Austria. One TPPT member indicated that sufficient data from this ongoing research may be available later this year so as to draw up at least a tentative conclusion regarding cold treatment response in the two most divergent *C. capitata* populations.

[22] The treatment lead for the draft PT *Ceratitidis capitata* on *Citrus sinensis* var. Navel and Valencia (2010-103) highlighted the need to revisit the experimental replication requirements for the proposed treatment schedules, noting that only 2 replicates were conducted at 16 days and one at 17 days. The TPPT agreed to discuss the issue of requirements for experimental replication underpinning proposed PT schedules at the next TPPT face-to-face meeting.

[23] The TPPT:

- (3) *agreed* to place on hold the review of the draft PTs “Cold treatment for *Ceratitidis capitata* on *Citrus clementina* var. Clemenules” (2010-102) and “Cold treatment for *Ceratitidis capitata* on *Citrus sinensis* var. Navel and Valencia” (2010-103) pending analysis of forthcoming complementary studies investigating possible population differences in cold tolerance.

#### High temperature forced air treatment for *Bactrocera melanotus* and *B. xanthodes* on papaya (2009-105)

[24] The treatment lead introduced the document and suggested that the draft responses to member comments may require some further discussion by the TPPT, particularly in view of this draft PT being the first high temperature forced air treatment to be considered under International Standard for Phytosanitary Measures (ISPM) 28: *Phytosanitary treatments for regulated pests on regulated articles*. The assistant treatment lead thought that the initial review of the member comments on the draft PT proceeded without noting any particular concerns that could not be readily addressed, and that the TPPT responses could be finalized expeditiously. A third member expressed that he would seek clarification on several comments submitted by a contracting party in his region in order to ensure that the response provided by the TPPT adequately addressed the concerns raised. The TPPT decided to hold an online discussion forum to finalise the draft TPPT responses to member comments on this PT after their consolidation by the three TPPT members that have led the discussion during the present meeting.

[25] The TPPT:

- (4) *agreed* for three TPPT members (MYERS, ORMSBY and YU) to review and consolidate the draft TPPT responses to the member comments on the draft PT “High temperature forced air treatment for *Bactrocera melanotus* and *B. xanthodes* on papaya” (2009-105) and to hold an e-forum discussion on the document with the expectation to finalize the responses before the TPPT 2015 face-to-face meeting.

#### Irradiation treatment for *Ostrinia nubilalis* (2012-009)

[26] The treatment lead introduced the documents and shared that most of the comments received from member consultation were easily addressed and helped to improve the clarity and consistency of the draft PT. He also noted that several comments regarding the treatment schedule required discussion by the TPPT, as these queried the treatment dose selected in the draft PT. Another member explained that two studies were reviewed for the development of this draft PT, each employing a different treatment endpoint—one with higher dose (and higher efficacy) preventing second instar development and one with a lower dose (and lower efficacy) preventing egg hatch. He recalled that, since the TPPT had previously considered the prevention of second instar larvae to be an acceptable treatment endpoint, the lower dose was selected. It was agreed by the TPPT members to discuss this issue at the 2015 TPPT face-to-face meeting in due consideration of the rationale of previous decisions made by the TPPT in developing the draft treatment.

[27] The TPPT:

- (5) *agreed* to discuss the draft member comments and treatment schedule of the draft PT “Irradiation treatment for *Ostrinia nubilalis*” (2012-109) at the 2015 face-to-face meeting.

#### Requirements for the use of phytosanitary treatments as phytosanitary measures (2014-008)

[28] The Secretariat reminded of the afore-mentioned SC approval of the draft specification “Requirements for the use of phytosanitary treatments as phytosanitary measures (2014-008)” (see section 2) and its decision to task the TPPT with developing the according draft ISPMs on requirements for fumigation treatments, temperature treatments, modified atmosphere treatments, chemical treatments and irradiation treatments (revision to ISPM 18: Guidelines for the use of irradiation as a phytosanitary measure), respectively.

[29] The TPPT decided on the following assignments of leads and assistant leads to develop the initial draft ISPMs for review and consultation at the 2015 face-to-face meeting:

- Requirements for the use of fumigation as a phytosanitary measure (2014-004)—Lead: Yuejin WANG; Assistant lead: Mike ORMSBY
- Requirements for the use of temperature treatments as a phytosanitary measure (2014-005)—Lead: Eduardo WILLINK; Assistant lead: Glenn BOWMAN
- Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006)—Lead: Scott MYERS; Assistant lead: Mike ORMSBY
- Requirements for the use of chemical treatments as a phytosanitary measure (2014-003)—Lead: Mike ORMSBY; Assistant lead: Patrick GOMES
- Requirements for the use of irradiation as a phytosanitary measure (Revision to ISPM 18) (2014-007)—Lead: Guy HALLMAN; Assistant lead: Andrew PARKER.

[30] The TPPT:

- (6) *agreed* to discuss the draft ISPMs on requirements for the use of phytosanitary treatments as phytosanitary measures, as listed above, at the 2015 face-to-face meeting.

#### **Development of various documents related to TPPT working procedures and research recommendations**

##### Instructions to assist NPPOs and RPPOs in proper and complete submissions

[31] This agenda item was deferred to the 2015 face-to-face meeting.

##### Use of extrapolation to estimate phytosanitary treatment efficacy

[32] The lead TPPT member introduced the document, which he explained was a re-draft in consideration of the comments received by TPPT members during the TPPT e-forum discussion held in March 2015. It was decided to open a second e-forum discussion on the draft document to further exchange views and share opinions on the subject.

[33] The TPPT:

- (7) *agreed* to hold a second TPPT e-forum discussion on the draft document “Use of extrapolation to estimate phytosanitary treatment efficacy” in June 2015.

##### “Probit 9” and efficacy standards for phytosanitary treatments

[34] The lead TPPT member introduced the document, noting that this was its first presentation to the TPPT. It was decided to open an e-forum discussion on the draft document to exchange views and share opinions on the subject.

[35] The TPPT:

- (8) *agreed* to hold a TPPT e-forum discussion on the draft document ““Probit 9” and efficacy standards for phytosanitary treatments” in June 2015.

#### **4. Other business**

##### Phytosanitary Temperature Treatment Expert Group

[36] The designated TPPT liaison member for the Phytosanitary Temperature Treatment Expert Group (PTTEG)<sup>7</sup> noted that this group will convene its first meeting from 17-20 August 2015 in Nelspruit, South Africa, and introduced the draft agenda for the meeting. He solicited comments from the TPPT members regarding any new issues regarding phytosanitary treatment research, regulation or operationalization the PTTEG might wish to consider when formulating its work programme. The TPPT members agreed to submit relevant comments on the draft PTTEG meeting agenda directly to the TPPT liaison member.

##### 2015 TPPT face-to-face meeting

[37] The Secretariat informed the members that the invitation letter for the 2015 TPPT face-to-face meeting (held from 31 August through 4 September 2015 in Fukushima, Japan) was forthcoming, providing the organizational and logistical details for the meeting. The forthcoming deadlines in connection with the meeting preparation were stressed, as follows:

- 29 June: Confirming attendance for the meeting;
- 29 June: Requesting funding assistance to attend the meeting (where appropriate);
- 27 July: Submitting all draft treatments and documents for the meeting.

#### **5. Close of the meeting**

[38] The Secretariat thanked all members for their participation and closed the meeting.

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<sup>7</sup> Phytosanitary Temperature Treatments Expert Group: <https://www.ippc.int/en/liasion/organizations/core-activities/standards-setting/phytosanitarytemperaturetreatmentsexpertgroup>.

**Appendix 1 - Agenda****2015 May TPPT Virtual Meeting**

*Meeting Schedule*  
26 May 2015

**13:00 TO 14:30 (ROME, ITALY)**

AGENDA ITEM	DOCUMENT NO.	PRESENTER
<b>1. Opening of the meeting</b>		NIYAZI
<ul style="list-style-type: none"> <li>Welcome by the IPPC Secretariat</li> <li>Virtual meeting information for Adobe Connect</li> <li>Adoption of the agenda and election of rapporteur</li> </ul>	02_TPPT_2015_May 01_TPPT_2015_May	
<b>2. IPPC Secretariat Updates</b>		NIYAZI
<ul style="list-style-type: none"> <li>Update from CPM-10</li> <li>Update from SC 2015 May</li> <li>Status of draft Phytosanitary Treatments</li> </ul>		
<b>3. TPPT Work Programme</b>		
3.1 Instructions to assist NPPOs and RPPOs in proper and complete submissions	03_TPPT_2015_May	ORMSBY
3.2 Use of Extrapolation to Estimate Phytosanitary Treatment Efficacy	04_TPPT_2015_May	HALLMAN
3.3 "Probit 9" and Efficacy Standards for Phytosanitary Treatments	05_TPPT_2015_May	HALLMAN
3.4 Review of member consultation (MC) comments on 6 draft Phytosanitary Treatments:		
1. VHT for <i>Carica papaya</i> Solo (2009-109)	06_TPPT_2015_May	HALLMAN
2. VHT for <i>Ceratitis capitata</i> in <i>Mangifera indica</i> (2010-106)	07_TPPT_2015_May	HALLMAN
3. CT for <i>Ceratitis capitata</i> on <i>Citrus clementina</i> var. <i>Clemenules</i> (2010-102)	12_TPPT_2015_May	WILLINK
4. CT for <i>Ceratitis capitata</i> on <i>Citrus sinensis</i> var. <i>Navel</i> and <i>Valencia</i> (2010-103)	<a href="#">IPP - TPPT work area</a>	BOWMAN
5. HTFAT for <i>Bactrocera melanotus</i> and <i>B. xanthodes</i> on papaya (2009-105)	08_TPPT_2015_May	YU
6. IRR for <i>Ostrinia nubilalis</i> (2012-009)	09_TPPT_2015_May 10_TPPT_2015_May	SMYTH
<b>4. Other business</b>		NIYAZI
<ul style="list-style-type: none"> <li>Issues for consideration by the PTTEG</li> <li>Face-to-face meeting</li> <li>Any other business</li> </ul>	11_TPPT_2015_May	HALLMAN NIYAZI
<b>5. Close of the meeting and feedback</b>		