Food and Agriculture Organization of the United Nations

International Plant Protection Convention

REPORT

Technical Panel on Phytosanitary Treatments

Virtual meeting
27 July 2021

IPPC Secretariat

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CONTENTS

1. Opening of the Meeting

1.1. Welcome by the IPPC Secretariat

[1] The International Plant Protection Convention (IPPC) Secretariat (hereafter referred to as "Secretariat") lead for the Technical Panel on Phytosanitary Treatments (TPPT) chaired the meeting and welcomed the following participants:

1. Mr David OPATOWSKI (TPPT Steward)
2. Mr Toshiyuki DOHINO (Japan)
3. Mr Walther ENKERLIN HOEFLICH (IAEA)
4. Mr Peter LEACH (Australia)
5. Mr Scott MYERS (USA)
6. Mr Michael ORMSBY (New Zealand)
7. Mr Matthew SMYTH (Australia)
8. Mr Eduardo WILLINK (Argentina)
9. Ms Janka KISS (IPPC Secretariat, lead)
10. Mr Erika MANGILI (IPPC Secretariat)

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

1.2. Adoption of the agenda and election of the rapporteur

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

[4] Mr Matthew SMYTH was elected as the Rapporteur.

2. TPPT work programme – Review of remaining treatments to be developed

[5] The TPPT was addressing the submissions that are not yet developed to consider ways to progress the development of each. It was noted that all the submissions and later provided information is posted on the restricted work area at a depositary page[2].

2.1 Sulfuryl fluoride fumigation treatment for *Chlorophorus annularis* on bamboo articles (2017-028)

[6] Mr Eduardo WILLINK, the Treatment Lead introduced the treatment that was submitted in 2017.

[7] All submitted information is available on the restricted work area: https://www.ippc.int/en/work-area-publications/85454/ The TPPT reviewed the treatment at their July 2017 meeting and asked for the following further information from the submitter:

- Clarify if eggs found on harvested bamboo can develop to adult, as it is known that fumigants penetrate eggs with difficulty.
- To further support that the demonstrated efficacy will indeed manage the phytosanitary risk and to justify the number of treated pests.
- Information on the moisture content of the treated bamboo measured, and what is the acceptable maximum moisture content.

At the June 2016 meeting, the TPPT discussed the information provided by the submitter. The TPPT concluded that eggs may be associated with the commodity at the time of fumigation (albeit in low numbers), and either efficacy data should be provided on eggs (as the most tolerant life stage), or proof provided that the tested life stage was the most tolerant, or an additional step (e.g. period in containment before fumigation to allow all eggs to hatch before treatment) could be included in the treatment.

[1] TPPT membership list: https://www.ippc.int/en/publications/81655/

[2] Draft phytosanitary treatments and submissions: https://www.ippc.int/en/work-area-pages/draft-phytosanitary-treatments-and-relevant-documents/

[8] The submitter provided additional information to the July 2019 meeting. The TPPT agreed to ask the submitter to consider conducting further tests in order to establish whether eggs are the most tolerant life stage and to compare the eggs tolerance to the tolerance of larvae thus allowing the calculation of efficacy based on data from larvae. The TPPT also asked the submitter to provide data on the egg tolerance at the lower end of the temperature ranges proposed in the schedule. They suggested the submitter consider a dose mortality approach to estimate the efficacy. Once these are provided, the treatment schedules for the two higher temperatures could be proposed for approval.

[9] For this meeting, the Submitter provided further information on testing eggs as this is usually the most fumigant tolerant stage. Therefore, the TPPT agreed that efficacy should be calculated based on tests done on eggs.

[10] **Table 1.** Minimum concentration-time product (CT) within a single 24 hour period for bamboo pole, fumigated with sulfuryl fluoride

Temperature (℃)	Dose (g/m^3)	Minimum concentration (g/m^3)				CT ($g\text{-}h/m^3$)
		0.5 h	2 h	4 h	24 h	
15 .6-21.1	96	103	93	87	63	1826
21 .1-26.7	80	85	77	73	53	1536
26 .7 or above	64	68	59	53	28	1008

[11] One member noted that the new information provided indicated 100 % egg mortality and queried whether lower doses were tested as well to allow to apply the dose mortality approach to estimate the efficacy.

[12] Although additional information had been provided, the total number of insects tested was still low. 457, 456 and 479 larvae of bamboo borer were treated with at 64,80,and 96g/m3, respectively (Yu et al, 2010). The TPPT thanked the submitter for providing the additional information and agreed that as is, the number of tested insects is too low to support the treatment. The TPPT requested the submitter to consider further tests to achieve over a thousand tested insects.

[13] The TPPT noted that the publication provided describing the Evaluation of Low Pressure and Vapor Heat as a Phytosanitary Treatment For *Chlorophorus annularis* (Coleoptera: Cerambycidae) in Postharvest Bamboo Poles could form the bases of a new submission for a different treatment.

[14] The TPPT

(1) *requested* the submitter to perform further tests in order to increase the number of insects (eggs) tested in order to establish the efficacy of the Sulfuryl fluoride fumigation treatment for *Chlorophorus annularis* on bamboo articles (2017-028).

2.2 Irradiation treatment for all stages of the family Pseudococcidae (generic) (2017-012)

[15] Mr Daojian YU, the Treatment Lead explained that the treatment is awaiting further information on compiling a comprehensive list of economically important species of the family. It was recalled that the Phytosanitary Measures Research Group (PMRG) has agreed to dedicate some effort to compile this list. The TPPT was also informed of a new CRP project of the IAEA that will start by the end of 2021 and will work on establishing a generic treatment in the coming years. The TPPT agreed to wait for this information.

2.3 Cold treatment for *Thaumatotibia leucotreta* on Citrus spp. (2017-029)

[16] Mr Peter LEACH, the Treatment Lead introduced the treatment lead summary, the responses to the consultation comments, the draft PT and the additional comments sent right before the previous meeting of the TPPT[3]. The TPPT decided in the previous meeting not to send this PT for second consultation until these comments were addressed.

[17] The Lead recapped the comments and updated the TPPT on the results of the follow up correspondence with the authors of the paper on questions the TPPT raised about the research. He informed the TPPT that progress was made in the raw data requested. The TPPT agreed to discuss the response to the additional comments (in document 4) in a future TPPT meeting.

2.4 Generic irradiation treatment against insects, except Lepidoptera larvae and pupae (2017-030)

[18] Mr Scott MYERS, the Treatment Lead explained that this is a treatment is very ambitious and challenging to establish, however the CRP project that the IAEA is proposing on generic treatments might be able to gather enough information to progress the treatment. The TPPT discussed the approach to establish a treatment by selecting the most resistant species of each insect group and then compare their tolerances, however they decided to wait for the CRP to conclude its work.

2.5 Irradiation treatment for *Epiphyas postvittana* on all fresh commodities (2017-018)

[19] Mr Daojian YU, the Treatment Lead explained that this treatment was discussed in June 2018 and a number of questions were sent to the submitter but no response was received so far.

[20] It was agreed that the IPPC Secretariat will send a reminder and request again responses to the questions raised on the infestation methods and the artificial diet, the reasoning why the sixth instar was not considered in establishing the most tolerant life stage, and how the number of treated insects was calculated.

2.6 Irradiation treatment for *Frankliniella occidentalis* on all fresh commodities (2017-019)

[21] Mr Toshiyuki DOHINO, the Treatment Lead recalled that the treatment was discussed in two virtual meetings in March 2018 and February 2019, and the TPPT had agreed that further tests were needed to proceed with this treatment. The submitter was requested to provide further information and the PMRG was also requested to consider how to conduct further research on this pest. Currently the TPPT is awaiting the result of these further studies, however the COVID pandemic delayed the progress of these. The TPPT agreed to consider this treatment once the studies were conducted.

2.7 CATTS (Controlled Atmosphere/Temperature Treatment System) treatments against codling moth (Cydia pomonella) and western cherry fruit fly (*Rhagoletis indifferens)* in cherry (2017-037)

[22] Mr Michael ORMSBY, the Treatment Lead, explained that a similar treatment is under consultation for different target pests. The treatment was discussed in June 2019 and the proposal was to put together another treatment for western cherry fruit fly, however further information was necessary from the submitter. The Lead agreed to follow up with the submitter again.

[3] 02_TPPT_2021_Jul, 03_TPPT_2021_Jul, 04_TPPT_2021_Jul, 2017-029

3. Improvement of the PT development process

3.1 Submission form and proposals for improvement

[23] The TPPT leads for this topic, Mr Peter LEACH and Mr Scott MYERS explained the issues and their considerations[4].

[24] They considered that it is beneficial that the submission form highlights the ISPM 28 criteria. They also considered that the quality of the submissions would improve if the submitters were more aware of the research guidelines developed by the PMRG.

[25] The TPPT reviewed the proposed online submission form and agreed that the online form is an improvement compared to the paper version and reduces the cumbersomeness of filling out the form. They proposed to create a form with a list of the necessary information (the same information as listed in the current submission form – that corresponds to the ISPM 28 criteria), but only ask for a yes/no answer, whether the criteria is addressed in the submitted supporting documentation. The TPPT agreed to also add an optional text box to add explanation to be able to reference the relevant part of the supporting documentation. This would mean that the submitter does not need to cut and paste or describe the information in the supporting documentation into the submission form thereby reducing the workload of the submitter.

[26] The TPPT agreed to

(2) *update* the online submission form according to their discussion

3.2 SC follow up: Proposal for a revised process for the development of PTs

[27] The TPPT was updated on the recent discussion of the SC on making the second consultation on PTs optional. The TPPT discussed the criteria to recommend PTs for adoption versus for another round of consultation, and agreed that significant change of the PT or a comment opposing the adoption would merit to send the PT for another consultation.

4. Close of the Meeting

[28] The Secretariat thanked the TPPT members for their participation and closed the meeting.

[4] 05_TPPT_2021_Jul

Appendix 1: Agenda

2021 JULY VIRTUAL MEETING OF THE TECHNICAL PANEL ON PHYTOSANITARY TREATMENTS (TPPT)

AGENDA

	AGENDA ITEM	DOCUMENT NO.	PRESENTER
1.	Opening of the meeting		
1.1	Welcome by the IPPC Secretariat		KISS / ALL
1.2	Adoption of the agenda and election of the rapporteur	01_TPPT_2021_Jul	KISS / ALL
2.	TPPT work programme - Review of remaining treatments to be developed	All submissions: https://www.ippc.int/en/work-area-pages/draft-phytosanitary-treatments-and-relevant-documents/	
2.1	Sulfuryl fluoride fumigation treatment for *Chlorophorus annularis* on bamboo articles (2017-028)		WILLINK
2.2	Irradiation treatment for all stages of the family Pseudococcidae (generic) (2017-012)		YU
2.3	Cold treatment for *Thaumatotibia leucotreta* on Citrus spp. (2017-029)		LEACH
	- Compiled comments	02_TPPT_2021_Jul	
	- Treatment Lead summary	03_TPPT_2021_Jul	
	- Additional comments	04_TPPT_2021_Jul	
	- Draft PT	2017-029	
2.4	Generic irradiation treatment against insects, except Lepidoptera larvae and pupae (2017-030)		MYERS
2.5	Irradiation treatment for *Epiphyas postvittana* on all fresh commodities (2017-018)		YU
2.6	Irradiation treatment for *Frankliniella occidentalis* on all fresh commodities (2017-019)		DOHINO
2.7	CATTS (Controlled Atmosphere/Temperature Treatment System) treatments against codling moth (*Cydia pomonella*) and western cherry fruit fly (*Rhagoletis indifferens*) in cherry (2017-037)		ORMSBY
3.	Improvement of the TP development process		
3.1	Submission form and proposals for improvement	05_TPPT_2021_Jul	LEACH, MYERS/ ALL
3.2	SC follow up: Proposal for a revised process for the development of PTs	06_TPPT_2021_Jul	OPATOWSKI/ KISS
4.	Close of the meeting	-	KISS