

2019 FIRST CONSULTATION

1 July – 30 September 2019

Compiled comments for Draft PT: Cold treatment for *Ceratitis capitata* on *Prunus avium*, *Prunus domestica* and *Prunus persica* (2017-022A)

Summary of comments

Name	Summary	SC response
Cuba	Estamos de acuerdo con la propuesta de tratamiento.	OK
European Union	Comments submitted by the European Commission on Behalf of the European Union and its 28 Member States.	OK
Malawi	Malawi supports draft Annex to ISPM 28: Cold treatment for <i>Ceratitis capitata</i> on <i>Prunus avium</i> , <i>Prunus domestica</i> and <i>Prunus persica</i> (2017-022A)	OK
South Africa	The National Plant Protection Organisation of South Africa (NPPOZA) has no comments and therefore accepts this standard.	OK

T (Type) - B = Bullet, C = Comment, P = Proposed Change, R = Rating

FAO sequential number	Para	Text	T	Comment	SC response
1	G	(General Comment)	C	Guyana We support the document in its entirety and have no objection with it moving forward. <i>Category : SUBSTANTIVE</i>	OK
2	G	(General Comment)	C	Mexico I support the document as it is and I have no comments <i>Category : SUBSTANTIVE</i>	OK
3	G	(General Comment)	C	Ecuador Comentario para las dos propuestas de anexos a la norma 28: En los protocolos se menciona se tiene un nivel de confianza del 95% en que el tratamiento conforme a este protocolo prevenga el desarrollo de puparios en no menos del 99,9979% de los huevos y las larvas de <i>Ceratitis capitata</i> , habla de "huevos" y larvas; mientras que en otra informaci#243;n pertinente se menciona que la eficacia del tratamiento se basa en la ausencia de desarrollo del pupario como medida de la mortalidad, cuyas cifras estimadas de individuos tratados incluyen a los huevos o solo es la estimaci#243;n de larvas que no se convirtieron en pupa?? <i>Category : TECHNICAL</i>	<u>CONSIDERED BUT NOT INCORPORATED</u> De Lima(2011) used larvae (more cold -tolerant than eggs) infesting fruit for large scale tests and the TPPT calculated the efficacy of schedule using the number of pupae from untreated group.

4	G	(General Comment)	C	<p>Peru Peru ratifica los comentarios y sugerencias concordados a nivel del COSAVE. <i>Category : SUBSTANTIVE</i></p>	<p><u>CONSIDERED BUT NOT INCORPORATED</u> See response to Comment 33</p>
5	G	(General Comment)	C	<p>European Union There are currently other required cold treatments against <i>Ceratitits capitata</i> in use in international trade, which can be considered as equivalent to the ones currently proposed in the draft Annexes of ISPM N 28. Their effectiveness have been proven. Neither interception nor non-compliances of any type have ever been recorded, which guarantees the continuity of their use in the international trade.</p> <p>Details of those cold treatment schedules have been sent to the Secretariat. <i>Category : SUBSTANTIVE</i></p>	<p><u>CONSIDERED BUT NOT INCORPORATED</u> It is recognized that there may be alternative treatments for the same commodity applied in international trade, however these were not submitted via the open call for topics and as the TPPT applies the criteria outlined in ISPM 28, and is required to establish a stated level of efficacy, these cannot be considered as annexes to ISPM 28 unless supporting data is submitted to corroborate the efficacy of these treatments. It is noted however, that there is no restriction to use these when agreed bilaterally.</p>
6	G	(General Comment)	C	<p>China 1.The requirement for temperature treatment is "to achieve pest mortality (including devitalization of seeds as pests) at a specified efficacy" according to ISPM No.42. 2.There is a conflict between "prevention pupariation" from "mortality of eggs and larvae" in line 23. 3.The current phytosanitary procedures and regulations including ISPM No.42 will be changed if prevention pupariation is used as the criteria for evaluating treatment efficacy of the fruit flies. 4.The mortality rate should be taken as the treatment efficiency, otherwise, once the live larvae are detected in the port quarantine, the effectiveness of the treatment cannot be judged, which will lead to trade disputes. <i>Category : SUBSTANTIVE</i></p>	<p><u>MODIFIED</u> The draft was modified and is now consistent with the adopted ISPM 28 -PTs (PT 24, 25, 26, 30 and 31). The TPPT decided to mention the end point of the schedules clearly (TPPT report June 2018, para 36) in the "other relevant information" section. Failure to pupariate is considered as an appropriate measure of mortality in this case. The detailed course of action when the live larvae are detected in import-inspection should be determined in the work plan under the bilateral agreement.</p>
7	G	(General Comment)	C	<p>Indonesia Indonesia thinks that the failure to pupariate as the measure of mortality for the cold treatment successfulness can be an operational problem for the inspector (especially for the importing country). Therefore, Indonesia suggests to further study this phytosanitary treatment. <i>Category : SUBSTANTIVE</i></p>	<p><u>MODIFIED</u> The draft was modified and is now consistent with the adopted ISPM 28-PTs (PT 24, 25, 26, 30 and 31). The TPPT decided to mention the end point of the schedules clearly (TPPT report June 2018, para 36) in the "other relevant information" section. Failure to pupariate is considered as an appropriate measure of mortality in this case. The detailed course of action when the live larvae are detected in import-inspection should be determined in the work plan under the bilateral agreement.</p>
8	G	(General Comment)	C	<p>Barbados Barbados has no changes to make to this draft. <i>Category : EDITORIAL</i></p>	<p>OK</p>

9	G	(General Comment)	C	Slovenia Slovenia would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System. <i>Category : TECHNICAL</i>	OK (See EPPO comments-28, 30 and 35)
10	G	(General Comment)	C	Bahrain no comment <i>Category : TECHNICAL</i>	OK
11	G	(General Comment)	C	Thailand Thailand has no objection on the proposed draft cold treatment for <i>Ceratitis capitata</i> on <i>Prunus avium</i> , <i>Prunus domestica</i> and <i>Prunus persica</i> <i>Category : SUBSTANTIVE</i>	OK
12	G	(General Comment)	C	United States of America We don't have any comments for this draft PT. <i>Category : TECHNICAL</i>	OK (We don't have ~)
13	G	(General Comment)	C	Malawi Malawi supports Annex ISPM 28: Cold treatment for <i>Ceratitis capitata</i> on <i>Prunus avium</i> , <i>Prunus domestica</i> and <i>Prunus persica</i> (2017-022A) <i>Category : SUBSTANTIVE</i>	OK
14	G	(General Comment)	C	Botswana In agreement with the protocol as it is science based <i>Category : TECHNICAL</i>	OK
15	G	(General Comment)	C	New Zealand New Zealand supports the standard. <i>Category : SUBSTANTIVE</i>	OK
16	G	(General Comment)	C	Congo j'approuve le projet d'annexe 224; la NIMP 28 <i>Category : SUBSTANTIVE</i>	OK
17	G	(General Comment)	C	Cuba Estamos de acuerdo con la propuesta de tratamiento. <i>Category : TECHNICAL</i>	OK
18	G	(General Comment)	C	Venezuela Venezuela considera que los tratamientos térmicos con frío aplicados a fruta como medida cuarentenaria específica para Mosca Mediterránea de la Fruta (<i>Ceratitis capitata</i>), es efectiva en diferentes cultivos, entre ellos los del género <i>Prunus</i> . En nuestro criterio, temperaturas menores a 5°C (0-2.22°C), producen mayor mortalidad de la plaga, siendo la eficacia un parámetro asociado con el tiempo de tratamiento empleado (el cual no debe exceder los 15 días continuos), no obstante, preocupa que pudiera estar comprometida la calidad de los frutos luego de la exposición durante un tiempo prolongado a temperaturas extremas. <i>Category : TECHNICAL</i>	<u>CONSIDERED BUT NOT INCORPORATED</u> Some countries has used the phytosanitary cold treatment with longer than 15 days-duration (for example, T107-a and T107-a-1 in USDA-APHIS-PPQ Treatment Manual).

Treatment schedule					
19	33	For <i>Prunus avium</i> there is 95% confidence that the treatment according to this schedule prevents pupariation <u>mortality</u> in not less than 99.9979% of eggs and larvae of <i>Ceratitis capitata</i> .	P	<p>China</p> <p>1.The requirement for temperature treatment is “to achieve pest mortality (including devitalization of seeds as pests) at a specified efficacy” according to ISPM No.42.</p> <p>2.There is a conflict between “prevention pupariation” from “mortality of eggs and larvae” in line 23.</p> <p>3.The current phytosanitary procedures and regulations including ISPM No.42 will be changed if prevention pupariation is used as the criteria for evaluating treatment efficacy of the fruit flies.</p> <p>4.The mortality rate should be taken as the treatment efficiency, otherwise, once the live larvae are detected in the port quarantine, the effectiveness of the treatment cannot be judged, which will lead to trade disputes.</p> <p>Category : <i>SUBSTANTIVE</i></p>	<u>MODIFIED</u> (see response to comment 6)
20	34	For <i>Prunus domestica</i> there is 95% confidence that the treatment according to this schedule prevents pupariation <u>mortality</u> in not less than 99.9984% of eggs and larvae of <i>Ceratitis capitata</i> .	P	<p>China</p> <p>Category : <i>SUBSTANTIVE</i></p>	<u>MODIFIED</u> (see response to comment 6)
21	35	For <i>Prunus persica</i> there is 95% confidence that the treatment according to this schedule prevents pupariation <u>mortality</u> in not less than 99.9983% of eggs and larvae of <i>Ceratitis capitata</i> .	P	<p>China</p> <p>Category : <i>SUBSTANTIVE</i></p>	<u>MODIFIED</u> (see response to comment 6)
22	37	For <i>Prunus avium</i> there is 95% confidence that the treatment according to this schedule prevents pupariation <u>mortality</u> in not less than 99.9982% of eggs and larvae of <i>Ceratitis capitata</i> .	P	<p>China</p> <p>Category : <i>SUBSTANTIVE</i></p>	<u>MODIFIED</u> (see response to comment 6)
23	38	For <i>Prunus domestica</i> there is 95% confidence that the treatment according to this	P	<p>China</p> <p>Category : <i>SUBSTANTIVE</i></p>	<u>MODIFIED</u> (see response to comment 6)

		schedule prevents pupariation mortality in not less than 99.9978% of eggs and larvae of <i>Ceratitis capitata</i> .			
24	39	For <i>Prunus persica</i> there is 95% confidence that the treatment according to this schedule prevents pupariation mortality in not less than 99.9986% of eggs and larvae of <i>Ceratitis capitata</i> .	P	China <i>Category : SUBSTANTIVE</i>	<u>MODIFIED</u> (see response to comment 6)
25	40	For both schedules, the fruit must reach the treatment temperature before treatment exposure time commences. The fruit <u>core</u> temperature should be monitored and recorded, and the temperature should not exceed the stated level throughout the duration of the treatment.	P	Japan As defined in section 4.2 of ISPM 42, the fruit core temperature should be monitored during cold treatment, so add "core" to clarify the monitoring point. In TPs of cold treatment that have been adopted so far, "core" is not defined in their requirements. However, in TPs of vapor heat treatment (PT 21, 30-32), "core" is defined in their requirements as defined in ISPM 42 (Section 4.2.3). Therefore, TPs of cold treatment that have been adopted so far need to be revised where necessary. <i>Category : SUBSTANTIVE</i>	<u>INCORPORATED</u> Revised draft PT. <u>CONSIDERED BUT NOT INCORPORATED</u> It was noted that some of the other cold treatments do not specify to measure temperatures at the core. The adopted cold treatments (PT 16, 17, 18, 24, 25, 26, 27, 28 and 29) were worded according to the research supporting them (depending on where the temperature was measured).
Other relevant information					
26	44	Schedules 1 and 2 were based on the work of De Lima (2011) and developed using failure to pupariate as the measure of mortality.	C	China Please explain why the results from Delima (2011) are inconsistent with Hallman et al. (2019) for the most cold tolerant stage(s) of the Mediterranean fruit flies from Australia. The most tolerant stage(s) is an important basis for formulating phytosanitary standard and evaluating the treatment efficacy. References: De Lima, C.P.F. (2011). Cold treatment and methyl bromide fumigation of Australian cherries, peaches, nectarines and plums (8 cultivars) infested with eggs and larvae of the Mediterranean fruit fly (<i>Ceratitis capitata</i> Wiedemann) Diptera: Tephritidae. South Perth, Australia, Department of Agriculture and Food Western Australia. 420 pp. Hallman G. J., Wang L. C., Uzel G. D., Cancio-Martinez E., Ceres-Barrios C. E., Myers S. W., and Vreysen M. J.	<u>CONSIDERED BUT NOT INCORPORATED</u> The TPPT cannot explain the inconsistencies in most cold-tolerant fly stage determined between De Lima (2011) and Hallman et al. (2019). There are a number of differences between the two studies that might account for the inconsistencies: different laboratories, researchers, infestation techniques of natural infestation, host fruits, rearing conditions, treatment schedules, end-points for defining mortality, and interpretations of results. Nevertheless, the TPPT carefully evaluated the data and results of DeLima (2011) and finds that they support the treatment as proposed.

				B. 2019. Comparison of Populations of <i>Ceratitis capitata</i> (Diptera: Tephritidae) from Three Continents for Susceptibility to Cold Phytosanitary Treatment and Implications for Generic Cold Treatments. <i>Journal of Economic Entomology</i> , 112(1):127-133, doi: https://doi.org/10.1093/jee/toy331 <i>Category : SUBSTANTIVE</i>	
27	45	The efficacy of schedule 1 was calculated based on the following estimated treated numbers of <u>treated <i>Ceratitis capitata</i></u> with no survivors:	P	European Union For clarity (see paragraph 65 and Appendix 7 of the 2018-06 TPPT report). <i>Category : EDITORIAL</i>	<u>INCORPORATED</u> Revised draft PT.
28	45	The efficacy of schedule 1 was calculated based on the following estimated treated numbers of <u>treated <i>Ceratitis capitata</i></u> with no survivors:	P	EPPO For clarity (see paragraph 65 and Appendix 7 of the 2018-06 TPPT report). <i>Category : EDITORIAL</i>	<u>INCORPORATED</u> Revised draft PT.
29	49	The efficacy of schedule 2 was calculated based on the following estimated treated numbers of <u>treated <i>Ceratitis capitata</i></u> with no survivors:	P	European Union For clarity (see paragraph 65 and Appendix 7 of the 2018-06 TPPT report). <i>Category : EDITORIAL</i>	<u>INCORPORATED</u> Revised draft PT.
30	49	The efficacy of schedule 2 was calculated based on the following estimated treated numbers of <u>treated <i>Ceratitis capitata</i></u> with no survivors:	P	EPPO For clarity (see paragraph 65 and Appendix 7 of the 2018-06 TPPT report). <i>Category : EDITORIAL</i>	<u>INCORPORATED</u> Revised draft PT.
31	53	Schedules 1 and 2 were developed using the following commodities and cultivars:	C	Argentina It is recommended not to mention varieties in this section, in order to avoid confusion when implementing the treatment scheme in the different species of <i>Prunus</i> . For more information, see the references section. On the other hand, according to ISPM 28, the requirement for varietal tests must be based on evidence that varietal differences have implications for treatment efficacy. <i>Category : SUBSTANTIVE</i>	<u>CONSIDERED BUT NOT INCORPORATED</u> Some adopted ISPM 28-PTs (PT 15, 16, 17, 18, 21, 25, 26, 27, 28, 29, 30, 31 and 32) have similar descriptions on varieties used in the mortality tests in the References.
32	53	Schedules 1 and 2 were developed using the following commodities and cultivars:	C	Uruguay It is recommended not to mention cultivars in this section, in order to avoid confusion when implementing the treatment schedule in different cultivars of <i>Prunus</i> sp. Detailed information on cultivars can be found in the references listed in "References" section. On the other hand, according	<u>CONSIDERED BUT NOT INCORPORATED</u> Some adopted ISPM 28-PTs (PT 15, 16, 17, 18, 21, 25, 26, 27, 28, 29, 30, 31 and 32) have similar descriptions on varieties used in the mortality tests in the References.

				to ISPM 28, a requirement for varietal testing should be based on evidence that the varietal differences impact treatment efficacy, and data should be provided to support the requirement <i>Category : TECHNICAL</i>	
33	53	Schedules 1 and 2 were developed using the following commodities and cultivars:	C	<p>COSAVE Se recomienda no hacer menci#243;n a los cultivares en esta secci#243;n, a fin de evitar confusi#243;n cuando se implemente el protocolo de tratamiento en las distintas especies de Prunus. Para mas informaci#243;n, se encuentra la secci#243;n de referencias. Por otro lado de acuerdo a la NIMF 28, la exigencia de pruebas varietales deben basarse en la evidencia de que las diferencias varietales tienen consecuencias para la eficacia del tratamiento.</p> <p>It is recommended not to mention varieties in this section, in order to avoid confusion when implementing the treatment scheme in the different species of Prunus. For more information, see the references section. On the other hand, according to ISPM 28, the requirement for varietal tests must be based on evidence that varietal differences have implications for treatment efficacy. <i>Category : TECHNICAL</i></p>	<p><u>CONSIDERED BUT NOT INCORPORATED</u> Some adopted ISPM 28-PTs (PT 15, 16, 17, 18, 21, 25, 26, 27, 28, 29, 30, 31 and 32) have similar descriptions on varieties used in the mortality tests in the References.</p>
References					
34	63	Vendramin E., Pea G., Dondini L., Pacheco I., Dettori MT., Gazza L., Scalabrin S., Strozzi F., Tartarini S., Bassi D., Verde I., Rossini L., 2014 2014. A Unique Mutation in a MYB Gene Cosegregates with the Nectarine Phenotype in Peach. PLoS One March 2014 9(3); e90574., doi: 10.1371/journal.pone.0090574.	P	<p>European Union A dot is missing after 2014. <i>Category : EDITORIAL</i></p>	<p><u>INCORPORATED</u> Revised draft PT.</p>
35	63	Vendramin E., Pea G., Dondini L., Pacheco I., Dettori MT., Gazza L., Scalabrin S., Strozzi F., Tartarini S., Bassi D.,	P	<p>Eppo A dot is missing after 2014. <i>Category : EDITORIAL</i></p>	<p><u>INCORPORATED</u> Revised draft PT.</p>

	<p>Verde I., Rossini L., 2014 <u>2014. A Unique Mutation in a MYB Gene Cosegregates with the Nectarine Phenotype in Peach. PLoS One March 2014 9(3); e90574., doi: 10.1371/journal.pone.0090574.</u></p>		
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