2019 FIRST CONSULTATION

1 July – 30 September 2019

Compiled comments for Draft annex to ISPM 28: Phytosanitary Treatment for Cold treatment for Ceratitis capitata on Vitis vinifera (2017-023A)

Summary of comments

Name	Summary
Cuba	Estamos de acuerdo con la propuesta de tratamiento, no hay comentarios al respecto.
European Union	Comments submitted by the European Commission on behalf of the European Union and its 28 Member States.
Malawi	Malawi support draft ISPM
Singapore	Singapore has no issue with this DP which is available in spanish version.
South Africa	The National Plant Protection Organisation of South Africa (NPPOZA) has no comments and therefore accepts this standard.
Viet Nam	Vietnam agree with this draft

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

FAO sequential number	Para	Text	T	Comment
1	G	(General Comment)	C	**Mexico** I support the document as it is and I have no comments *Category : SUBSTANTIVE*
2	G	(General Comment)	C	**Guyana** Guyana does not have any comments at this time on the draft document provided, and therefore have no objections with it moving forward. *Category : SUBSTANTIVE*
3	G	(General Comment)	C	**Peru** Perú ratifica los comentarios y sugerencias concordados a nivel del COSAVE. *Category : SUBSTANTIVE*
4	G	(General Comment)	C	**European Union** There are currently other required cold treatments against Ceratitits capitata 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. Details of those cold treatment schedules have been sent to the Secretariat.

				Category : SUBSTANTIVE
5	G	(General Comment)	C	**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. *Category : SUBSTANTIVE*
6	G	(General Comment)	C	**Barbados** Barbados has no additional comments to make on this draft. *Category : EDITORIAL*
7	G	(General Comment)	C	**Slovenia** Slovenia would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System. *Category : TECHNICAL*
8	G	(General Comment)	C	**Bahrain** no comment *Category : TECHNICAL*
9	G	(General Comment)	C	**Israel** Israel would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System *Category : SUBSTANTIVE*
10	G	(General Comment)	C	**Venezuela** Al comparar el documento, con la experiencia desarrollada en el ámbito nacional, se puede decir que se considera que las temperaturas propuestas para el tratamiento con frió de C. capitata en frutos de V. vinifera, a los tiempos de exposición señalados, son adecuados para alcanzar un nivel de eficacia adecuado de mortalidad de la plaga, siendo este una alternativa efectiva y alternativa a la fumigación con Bromuro de Metilo *Category : TECHNICAL*
11	G	(General Comment)	C	**Thailand** Thailand has no objection on the proposed draft cold treatment for Ceratitis capitata on Vitis vinifera *Category : SUBSTANTIVE*
12	G	(General Comment)	C	**Malawi** Malawi supports the Draft Annex to ISPM 28 : Cold Treatment for Ceratitis capitata on Vitis vinifera (2017-023A) *Category : SUBSTANTIVE*
13	G	(General Comment)	C	**Botswana** We are in agreement with the standard which is justified scientifically *Category : TECHNICAL*
14	G	(General Comment)	C	**New Zealand** New Zealand supports the draft standard. *Category : SUBSTANTIVE*

15	G	(General Comment)	C	**Cuba** Estamos de acuerdo con la propuesta de tratamiento. *Category : TECHNICAL*
16	G	(General Comment)	C	**Guinea-Bissau** I agree *Category : TECHNICAL*
DRAFT ANNEX TO ISPM 28: Cold treatment for Ceratitis capitata on Vitis vinifera (2017-023A)				
17	1	**DRAFT ANNEX TO ISPM 28: Cold treatment for *Ceratitis capitata* on *Vitis vinifera* (2017-023A)**	C	**Viet Nam** Vietnam agree with this draft *Category : SUBSTANTIVE*
Scope of the treatment				
18	23	**Scope of the treatment**	C	**Eswatini** Standard acceptable *Category : SUBSTANTIVE*
19	24	Este tratamiento describe la aplicación de frío a frutos de *Vitis vinifera* (uvas de mesa) para inducir la mortalidad de los huevos y larvas de *Ceratitis capitata* con la eficacia indicada[1].	C	**Ecuador** Se debe especificar que los tratamientos de temperaturas van dirigidos al centro de la pulpa y que los periodos son establecidos para los diferentes países importadores. *Category : TECHNICAL*
Treatment description				
20	31	**Target regulated articles** Fruit of *Vitis vinifera* (table grapes)	P	**European Union** For clarity, and for consistency with paragraph 24 of this draft and with the draft PTs 2017-022A (paragraph 30) and 2017-022B (paragraph 32). *Category : EDITORIAL*
21	31	**Target regulated articles** Fruit of *Vitis ~~vinifera~~vinifera* (table grapes)	P	**EPPO** For clarity, and for consistency with paragraph 24 of this draft and with the draft PTs 2017-022A (paragraph 30) and 2017-022B (paragraph 32). *Category : EDITORIAL*
22	31	**Artículos reglamentados objeto del tratamiento** Frutos de *Vitis vinifera*	C	**Ecuador** Especificar las condiciones de la fruta. *Category : TECHNICAL*
Treatment schedule				
23	33	**Protocolo 1: 16 días consecutivos a 1 °C o temperatura inferior**	C	**Ecuador** Se debería especificar la humedad relativa para los tres protocolos. Cuál es la temperatura inferior debe existir un límite permitido. *Category : TECHNICAL*
24	34	There is 95% confidence that the treatment according to this schedule ~~prevents pupariation~~ mortality in not less than 99.9987% of eggs and larvae of *Ceratitis capitata.*	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 24.

				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. *Category : SUBSTANTIVE*
25	36	There is 95% confidence that the treatment according to this schedule ~~prevents pupariation~~ mortality in not less than 99.9987% of eggs and larvae of *Ceratitis capitata.*	P	**China** *Category : SUBSTANTIVE*
26	37	**Protocolo 3: 20 días consecutivos a 3 °C o temperatura inferior**	C	**United States of America** 1. Temperature fluctuation during the research. In the research data provided, it's common to see + 0.4 °C variation (above the temperature set) in fruit pulp temperatures between two or more consecutive readings. This temperature fluctuation could indicate problems with the research equipment or the probe placement. 2. Minor notes on research details. It would have been useful for the researchers to provide additional details on the following topics: a. Colony health parameters such as percentage of larval pupation and of egg and pupal eclosion, fecundity of the flies, mean weight of the pupae, and sex ratio of the adults, to ensure that the experimental colony had no health issues that could have influenced the research results. b. Information on whether the colonies used in this experiment were replaced in the manner and at the frequency described by DeLima et al. (2007). c. Infestation rate per grape during the experiments, along with any comments on whether this infestation rate could have influenced the experimental results. d. Pictures and/or diagrams showing the experimental setup for the cold treatment, such as arrangement of cartons on the pallets in the cold treatment chamber, placement of probes within the stacks, etc. Literature Cited: DeLima, C. P. F., A. J. Jessup, L. Cruickshank, C. J. Walsh, and E. R. Mansfield. 2007. Cold disinfestation of citrus (Citrus spp.) for Mediterranean fruit fly (Ceratitis capitata) and Queensland fruit fly (Bactrocera tryoni) (Diptera: Tephritidae). New Zealand Journal of Crop and Horticultural Science 35: 39-50. Gasparich GE, JG Silva, HY Han, BA Mcpheron,GJ. Steck, WS

				Sheppard. 1997. Population genetic structure of Mediterranean fruit fly (Diptera: Tephritidae) and implications for worldwide colonization patterns. Ann Entomol Soc Am 90: 790–797. Gasperi, G, M Bonizzoni, LM Gomulski, V Murelli, C Torti, AR Malacrida, CR Guglielmino. 2002. Genetic differentiation, gene flow and the origin of infestations of the medfly, Ceratitis capitate. Genetica 116: 125-135. He, M, DS Haymer. 1999. Genetic relationships of populations and the origins of new infestations of the Mediterranean fruit fly. Mol Ecol 8: 1247-1257. Malacrida AR, LM Gomulski, M Bonizzoni, S Bertin, G Gasperi, CR Guglielmino. 2007. Globalization and fruitfly invasion and expansion: the medfly paradigm. Genetica 131: 1-9. *Category : TECHNICAL*
27	38	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 *Ceratitis capitata.*	P	**China** *Category : SUBSTANTIVE*
28	39	For all three schedules, the fruit must reach the treatment temperature before treatment exposure time commences. The fruit core 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. *Category : SUBSTANTIVE*
29	39	For all three schedules, the fruit must reach the treatment temperature before treatment exposure time commences. The fruit temperature should be monitored and recorded, and the temperature should not exceed the stated level throughout the duration of the treatment.	C	**Egypt** The temperature of the treatment schedule should be recorded in real time to guarantee the successfulness of the treatment commenced. *Category : TECHNICAL*
30	39	En los tres protocolos, la fruta debe alcanzar la temperatura de tratamiento antes de que comience a registrarse el tiempo de exposición. Debería controlarse y registrarse la temperatura de la fruta, que no debería superar el nivel especificado en toda la duración del tratamiento.	C	**Ecuador** Especificar el tipo y calibración de los sensores de temperatura. *Category : TECHNICAL*
Other relevant information				
31	41	**Other relevant information**	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 Vitis vinifera. Detailed information on cultivars can be found in the references listed in

				"References" section. On the other hand, according 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. *Category : TECHNICAL*
32	42	Al evaluar este tratamiento, el Grupo técnico sobre tratamientos fitosanitarios consideró cuestiones relativas a los regímenes de temperaturas y el acondicionamiento térmico, teniendo en cuenta el trabajo de Hallman y Mangan (1997).	C	**Ecuador** Especificar que se el tratamiento en frío se lo debe realizar en contenedores auto-refrigerados, las características y condiciones del contenedor, *Category : TECHNICAL*
33	43	The efficacy of schedules 1, 2 and 3 was calculated based on an estimated 223 ~~523~~522, 227 190 and 217 88~~1~~2, respectively, larvae treated with no survivors.	P	**Australia** Clarification as per De Lima et al., 2017 (Table 2,pg312). *Category : EDITORIAL*
34	44	Schedules 1, 2 and 3 were based on the work of De Lima (2007) and De Lima *et al.* (2011) and were developed using the cultivars 'Red Globe', 'Crimson Seedless' and 'Thompson Seedless', and using failure to pupariate as the measure of mortality.	C	**Argentina** It is recommended not to mention cultivars in this section, in order to avoid confusion when implementing the treatment protocol in the different cultivars. 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 effectiveness. *Category : SUBSTANTIVE*
35	44	Schedules 1, 2 and 3 were based on the work of De Lima (2007) and De Lima *et al.* (2011) and were developed using the cultivars 'Red Globe', 'Crimson Seedless' and 'Thompson Seedless', and using failure to pupariate as the measure of mortality.	C	**China** Please explain why the results from Delima (2007) and Delima et al. (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. 2007. Cold treatment at 1 °C, 2 ° C and 3 °C of Australian table grapes (Vitis vinifera L.) infested with eggs and larvae of the Mediterranean fruit fly Ceratitis capitata (Wiedemann) Diptera: Tephritidae. South Perth, Australia, Department of Agriculture and Food Western Australia. 126 pp. De Lima, C.P.F., Jessup, A.J., Mansfield, E.R. & Daniels, D. 2011. Cold treatment of table grapes infested with Mediterranean fruit fly Ceratitis capitata (Wiedemann) and Queensland fruit fly Bactrocera tryoni (Froggatt) Diptera: Tephritidae. New Zealand Journal of Crop and Horticultural Science, 39 (2): 95–105. Hallman G. J., Wang L. C., Uzel G. D., Cancio-Martinez E., Cáceres-Barrios C. E., Myers S. W., and Vreysen1 M. J. B. 2019. Comparison of Populations of Ceratitis capitata (Diptera: Tephritidae) from Three Continents for Susceptibility to Cold Phytosanitary Treatment and Implications for Generic Cold Treatments. Journal of Economic Entomology, 112(1):127-133, doi: https://doi.org/10.1093/jee/toy331

				Category : SUBSTANTIVE
36	44	Schedules 1, 2 and 3 were based on the work of De Lima (2007) and De Lima *et al.* (2011) and were developed using the cultivars 'Red Globe', 'Crimson Seedless' and 'Thompson Seedless', and using failure to pupariate as the measure of mortality.	C	**COSAVE** Se recomienda no hacer mención a los cultivares en esta sección, a fin de evitar confusión cuando se implemente el protocolo de tratamiento en los distintos cultivares. Para mas información, se encuentra la sección 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. It is recommended not to mention cultivars in this section, in order to avoid confusion when implementing the treatment protocol in the different cultivars. 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 effectiveness. *Category : TECHNICAL*
37	44	Los protocolos 1, 2 y 3, que se basan en los trabajos de De Lima (2007) y De Lima *et al*. (2011), se elaboraron utilizando los cultivares 'Red Globe', 'Crimson Seedless' y 'Thompson Seedless' y utilizando la ausencia de desarrollo del pupario como medida de la mortalidad.	C	**Ecuador** Y si para el resto de cultivares no son las mismas temperaturas para el tratamiento? *Category : TECHNICAL*
38	44	Los protocolos 1, 2 y 3, que se basan en los trabajos de De Lima (2007) y De Lima *et al.* (2011), se elaboraron utilizando los cultivares 'Red Globe', 'Crimson Seedless' y 'Thompson Seedless' y utilizando la ausencia de desarrollo del pupario como medida de la mortalidad.	C	**Peru** Se recomienda no hacer mención a los cultivares en esta sección, a fin de evitar confusión cuando se implemente el protocolo de tratamiento en los distintos cultivares. Para mas información, se encuentra la sección 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. *Category : TECHNICAL*
References				
39	49	~~**De Lima C.P.F., Mansfield E.R., Poogoda S.R.** 2017. International market access for Australian tablegrapes through cold treatment of fruit flies with a review of methods, models and data for fresh fruit disinfestation. *Australian Journal of Grape and Wine Research* 23: 306-317.~~	P	**European Union** This reference is not mentioned in the draft. *Category : EDITORIAL*
40	49	~~**De Lima C.P.F., Mansfield E.R., Poogoda S.R.** 2017. International market access for Australian tablegrapes through cold treatment of fruit flies with a review of~~	P	**EPPO** This reference is not mentioned in the draft. *Category : EDITORIAL*

		~~methods, models and data for fresh fruit disinfestation. *Australian Journal of Grape and Wine Research* 23: 306-317.~~		