2019 FIRST CONSULTATION

1 July – 30 September 2019

Compiled comments for Draft PT: Cold treatment for Bactrocera tryoni on Vitis vinifera (2017-023B)

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 the draft PT Cold treatment for Bactrocera tryoni on Vitis vinifera (2017-023)	OK
Singapore	Singapore agreed with the draft.	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. *Category : SUBSTANTIVE*	OK
2	G	(General Comment)	C	**Mexico** I support the document as it is and I have no comments *Category : SUBSTANTIVE*	OK
3	G	(General Comment)	C	**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 22. 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.	MODIFIED The draft was modified and 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.

				Category : SUBSTANTIVE	
4	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*	MODIFIED The draft was modified and 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 considerd 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.
5	G	(General Comment)	C	**Barbados** Barbados has no changes to make to this draft. *Category : EDITORIAL*	OK
6	G	(General Comment)	C	**Slovenia** Slovenia would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System. *Category : TECHNICAL*	OK (See EPPO comments-14)
7	G	(General Comment)	C	**Bahrain** no comment *Category : TECHNICAL*	OK
8	G	(General Comment)	C	**Thailand** Thailand has no objection on the proposed draft cold treatment for Bactrocera tryonii on Vitis vinifera *Category : SUBSTANTIVE*	OK
9	G	(General Comment)	C	**Botswana** The annex is scientifically justified and we are in agreement with the proposed treatment. *Category : TECHNICAL*	OK
10	G	(General Comment)	C	**Malawi** Malawi supports draft PT Cold Treat ment for Bactrocera tryoni on Vitis vinifera (2017-023B) *Category : SUBSTANTIVE*	OK
11	G	(General Comment)	C	**New Zealand** New Zealand supports the standard. *Category : SUBSTANTIVE*	OK
12	G	(General Comment)	C	**Cuba** Estamos de acuerdo con la propuesta de tratamiento. *Category : TECHNICAL*	OK
Treatment description					
13	29	**Target regulated articles** Fruit of *Vitis vinifera*- (table grapes)	P	**European Union** For clarity, and for consistency with paragraph 22 of this draft and with the draft PTs 2017-022A (paragraph 30) and 2017-022B (paragraph 32). *Category : EDITORIAL*	INCORPORATED Revised draft PT.
14	29	**Target regulated articles** Fruit of *Vitis*	P	**EPPO** For clarity, and for consistency with paragraph 22 of this draft	INCORPORATED Revised draft PT.

		~~*vinifera*~~*vinifera* ~~-~~(table grapes)		and with the draft PTs 2017-022A (paragraph 30) and 2017-022B (paragraph 32). *Category : EDITORIAL*	
Treatment schedule					
15	30	**Treatment schedule**	C	**United States of America** 1. Infestation procedures. The researchers used artificial infestation to inoculate the grapes with B. tryoni. When artificial infestation is used, we recommend confirming that the cold tolerance of the pest is the same for both artificial and natural (i.e., oviposition) infestation. Hallman (2014) cautioned against making assumptions regarding the equivalency of infestation techniques without testing. 2. Geographic origin of lab colonies. Genetic studies indicate that population differentiation, caused by restricted gene flow and genetic drift, exists among Queensland fruit flies collected from various geographic locations in Australia (Gilchrist et. al. 2006; Gilchrist and Meats. 2010). The lab colony used in this experiment was from a restricted geographic location. It is unknown whether cold tolerance variation among geographically-isolated populations could affect the schedule efficacy. 3. Temperature fluctuation during the research. In the research data provided, it is common to have a few up to more than 600 temperature readings outside ± 0.5°C range for a single replicate. The frequent readings with 0.5°C lower than the required temperature could bring into question the efficacy of the recommended treatment. This temperature fluctuation could also indicate problems with the research equipment or the probe placement. 4. 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 for B. tryoni 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	CONSIDERED BUT NOT INCORPORATED The TPPT reviewed the submitted documents from the points mentioned. 1) On the topic of artificial infestation, the TPPT concluded that as long as the larvae developed in the fruit and consumed it, the infestation method is not affecting the tolerance of the insect (as opppsed to late instar planted into the fruit, instead of the egg) (refer to [24] in the Report TPPT 2018). This draft for B. tryoni (2017-023B) was treated similarly. 2) While this might be the case, the TPPT is unaware of the facts that affects the cold treatment against B. tryoni in table grapes. 3) In fact, Table 55 (2°C, Replicate 3) in NSW DPI (2007) shows such a big temperature flactuation, and this draft (2017-023B) has 2 cold treatment schedules at 1°C and at 3°C. 4-a) NSW DPI (2007) reported that the hatchability, average weight per pupa and pupal emergence were recorded. 4-b) NSW DPI (2007) reported "The laboratory colony of B. tryoni was established at the Gosford Postharvest Laboratoryin 1956…Each year since 1988 wild fruit fly are bred from field-infested fruit brought into the laboratory….The wild characteristics of the laboratory colony are maintained with introductions of B. tryoni reared from wild-infested fruit collected from growing regions around New South Wales". 4-c) The average number of pupae obtained per fruit in control was 0.1-24.56 in the large scale test in NSW DPI (2007), although the infestation rate is higher than the infestation rate in the field, it is considered that an appropriate method was used for the disinfestation test.

				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. Gilchrist AS, B Dominiak, PS Gillespie, JA Sved. 2006. Variation in population structure across the ecological range of the Queensland fruit fly, Bactrocera tryoni. Australian J Zool. 54: 87-95. Gilchrist AS, AW Meats. 2010. The genetic structure of populations of an invading pest fruit fly, Bactrocera tryoni, at the species climatic range limit. Heredity 105: 165-172. Hallman, G. J. 2014. Insect thermotolerance comparing host infestation methods: Anastrepha ludens (Diptera: Tephritidae) reared in grapefruit or diet. Journal of Economic Entomology 107(4): 1377 – 1384. *Category : TECHNICAL*	4-d) NSW DPI (2007) had the diagrams showing the experimental setup in the large scale trials.
16	32	There is 95% confidence that the treatment according to this schedule ~~prevents pupariation~~ mortality in not less than 99.9964% of eggs and larvae of *Bactrocera tryoni*.	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 22. 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*	MODIFIED The draft was modified and 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 considerd 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.
17	34	There is 95% confidence that the treatment according to this schedule ~~prevents pupariation~~ mortality in not less than 99.9984% of eggs and larvae of *Bactrocera tryoni*.	P	**China** *Category : SUBSTANTIVE*	MODIFIED (see response in 16)

18	35	For both 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*	INCORPORATED Revised draft PT. CONSIDERED BUT NOT INCORPORATED 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					
19	37	**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*	CONSIDERED BUT NOT INCORPORATED 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.
20	42	Schedule 2 was developed using the cultivars 'Red Globe', 'Crimson Seedless' and 'Thompson Seedless'.	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 Vitis. 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. *Category : SUBSTANTIVE*	CONSIDERED BUT NOT INCORPORATED 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.
21	42	Schedule 2 was developed using the cultivars 'Red Globe', 'Crimson Seedless' and 'Thompson Seedless'.	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 de Vitis. 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 varieties in this section, in order to avoid confusion when implementing the treatment	CONSIDERED BUT NOT INCORPORATED 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.

				scheme in the different species of Vitis. 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. *Category : TECHNICAL*	