2021 SECOND CONSULTATION

1 July – 30 September 2021

Compiled comments for Draft PT: Irradiation treatment for Tortricidae on fruits (2017-011)

Summary

Name	Summary
EPPO Σ	A comment from the EPPO countries
European Union	The comments on this draft standard have been entered into the OCS by the European Commission on behalf of the EU and its member States.
Singapore	Singapore is supportive of this draft.
South Africa	The NPPOZA is in agreement with this draft and has no further comments
Venezuela	No tenemos opinión alguna sobre la norma.

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** Guyana has no objection at this time. *Category : SUBSTANTIVE*	**Noted**
2	G	(General Comment)	C	**Costa Rica** we have no comments *Category : SUBSTANTIVE*	**Noted**
3	G	(General Comment)	C	**Nepal** Nepal has no comments on DRAFT ANNEX TO ISPM 28: Irradiation treatment for Tortricidae on fruits *Category : EDITORIAL*	**Noted**
4	G	(General Comment)	C	**Mexico** I support the document as it is and I have no comments *Category : SUBSTANTIVE*	
5	G	(General Comment)	C	**Russian Federation** The Russian Federation would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System *Category : SUBSTANTIVE*	**Noted**
6	G	(General Comment)	C	**Canada** Canada supports the draft Annex to ISPM 28 *Category : SUBSTANTIVE*	**Noted**
7	G	(General Comment)	C	**European Union** The comments by the EU and its Member States are provided without prejudice to the European	**Noted**

				Union food safety legislation imposing limitations on the acceptance of irradiated goods. *Category : SUBSTANTIVE*	
8	G	(General Comment)	C	**Colombia** However, in the new proposal for ISPM 18 [2021 First Consultation: Draft ISPM: Revision of ISPM 18 (2014-007)] this paragraph was not included but does appear in this proposed annex: [39] This treatment should not be applied to fruit stored in a modified atmosphere because the modified atmosphere may affect the treatment efficacy. It is not clear whether modified atmospheres affect the efficiency of irradiation treatment, but if so, it should have been included in the new proposal for ISPM 18.. *Category : SUBSTANTIVE*	**Considered, but not incorporated** This comment does not apply to the present Draft PT
9	G	(General Comment)	C	**Malawi** We support the draft Annex to ISPM 28: Irradiation treatment for Tortricidae on fruits (2017-011) *Category : SUBSTANTIVE*	**Noted**
10	G	(General Comment)	C	**Barbados** Barbados agrees with proposal. *Category : SUBSTANTIVE*	**Noted**
11	G	(General Comment)	C	**United States of America** • We do not support this treatment at 250 Gy. The reasons are as follows: o The body of literature available so far comprises studies on irradiation treatment of twelve Tortricidae species, some of which include important quarantine pests even though they only represent a small percentage of the over 10,000 species described in this family. Quarantine irradiation research has been conducted on five species (Cydia pomonella, Epiphyas postvittana, Grapholita molesta, Lobesia botrana, Thaumatotibia leucotreta). o Of the twelve species, for which relevant quarantine data are available, doses of five species (Cydia pomonella, Cryptophlebia illepida, Epiphyas postvittana, Grapholita molesta, Thaumatotibia leucotreta) were verified with large-scale testing (>10,000 individuals). Irradiation doses applied in these studies ranged from 100 Gy to 289 Gy.	**Considered, but not incorporated** Note that the USA submitted this proposed PT at 250 Gy. In the second paragraph of the comment, note that 12, not 5, species have been studied. As the NPPO of the USA has approved a generic irradiation treatment for Tortricidae (at 290 Gy; see USDA Treatment manual), we assume that they have no serious objection to the number of species studied, as discussed in paragraphs 2 and 3 of the comment. In paragraph 4, details supporting the rejection are presented. We do not agree that sufficient information on dosimetry has not been provided in "many" studies. In the 4th paragraph it is mentioned that Follett and Lower (2000) recorded a maximum dose of 289 Gy when the target dose was 250 Gy. However, APHIS approved doses of 250 Gy for the 2 species that Follett and Lower studied, demonstrating that APHIS had confidence that 250 Gy was sufficient (USDA Treatment Manual). The paragraph concludes that the dose for this proposed PT should be 290 Gy. The 5th paragraph notes that "an extra safety margin" should be added to the proposed 250 Gy dose.

				o It appears that most species of Tortricidae may be effectively controlled by a target dose of 200 Gy or higher. However, many studies do not provide sufficient information on dosimetry. Follett and Lower (2000) reported a dose range of up to 289 Gy in their large-scale confirmatory testing of Cryptophlebia illepida. During their dose-response testing with a target dose of 250 Gy, the authors reported the emergence of one adult with deformed wings. Therefore, in the absence of information on true dose ranges, dose variations should be considered. Furthermore, the maximum dose recorded in a large-scale confirmatory test would become the minimum dose for commercial applications. Thus, a dose of 290 Gy would be recommended. o Given a number of uncertainties associated with various research studies (e.g., dose ranges not provided, high control mortality, incomplete information about colony history, unknown pesticide history of test fruit), the addition of an extra safety margin to the proposed 250 Gy treatment should be considered. *Category : SUBSTANTIVE*	We agree that a safety margin should be added to generic treatments for the reasons given in paragraph 5. As all of the studies indicate that ~200 Gy could be sufficient for the species of Tortricidae studied, that extra safety margin has been added: thus, 250 Gy. Only one study (Follett and Lower 2000) gives any reason to suspect that 250 Gy might be insufficient, and that reason is not substantial. Note that there are numerous exceptions to the generic dose of 150 Gy for Tephritidae. In fact, the worst-case scenario publication suggests that the dose required for this family of flies should be closer to 1000 Gy! But APHIS as well as the IPPC have agreed that 150 Gy is sufficient upon close scrutiny of the research that seems to not support 150 Gy.
12	G	(General Comment)	C	**Thailand** Thailand has no objection on the Draft PT: Irradiation treatment for Tortricidae on fruits. *Category : SUBSTANTIVE*	**Noted**
DRAFT ANNEX TO ISPM 28: Irradiation treatment for Tortricidae on fruits (2017-011)					
13	1	**DRAFT ANNEX TO ISPM 28: IRRADIATION TREATMENT FOR TORTRICIDAE ON FRUITS (2017-011)**	C	**Viet Nam** VN agrees with this draft annex to ISPM 28, *Category : SUBSTANTIVE*	**Noted**
14	1	**DRAFT ANNEX TO ISPM 28: IRRADIATION TREATMENT FOR TORTRICIDAE ON FRUITS (2017-011)**	C	**Uruguay** We agree with the document as it is, no comments *Category : TECHNICAL*	**Noted**
Other relevant information					
15	41	Because irradiation may not result in outright mortality, inspectors may encounter live but non-viable Tortricidae eggs or larvae, or deformed adults, during	C	**Colombia** In text: "Because irradiation may not result in outright mortality, inspectors may encounter live but non-viable Tortricidae eggs or larvae, or deformed adults, during the inspection process.	**Considered but not incorporated** Colombia suggests that an independent verification of efficacy at inspection is needed for irradiation treatments as mortality is not expected; with all other treatments mortality is an independent verification of

		the inspection process. This does not imply a failure of the treatment.		This does not imply a failure of the treatment.", the alternatives to follow should be included to clearly define when the treatment was or was not effective. Live insects of Tortricidae are assumed to be non-viable, but this condition would have to be assessed to confirm or disprove it. If live pests are found, the NPPO should consider taking emergency treatment and initiate viability assessment of the pests that are found alive. Situation that should be defined within ISPM 18. It is not clear what would be the reference to evaluate the effectiveness or not of the treatment by the inspectors. What could be lent for misinterpretations in the final result of the treatment. *Category : TECHNICAL*	efficacy. This is a worthy objective, but there is no viable independent verification of efficacy for irradiation. Verification of efficacy depends on the research and treatment implementation and has been adequate for the 26 years that the treatment has been used commercially.
16	42	The Technical Panel on Phytosanitary Treatments (TPPT) based its evaluation of this treatment on the research reported by Hallman *et al.* (2013), which supported the efficacy of irradiation as a treatment for Tortricidae on host commodities.	C	**Colombia** Although the evidence from research studies on some Tortricidae species supports the use of irradiation on some products, seeking to extrapolate it may be leading to a lower efficacy of the irradiation treatment. The Tortricidae family is made up of more than 10 thousand species, therefore, seeking to extrapolate the treatment would have to make a prior evaluation. *Category : SUBSTANTIVE*	**Considered but not incorporated** Colombia questions whether sufficient numbers of species have been studied. The TPPT has considered this and concluded that sufficient numbers of key economic pests have been studied and that the proposed dose has adequate margin of error to compensate.
17	43	The efficacy of this schedule was calculated based on a total of 58 779 fifth-instar larvae of *Grapholita molesta* treated with no viable adult emergence; the control emergence was 94.8%. The data for *G. molesta* were used as it is considered the most radio-tolerant of the species studied ~~(Hallman, 2004)~~(Hallman *et al*. 2013).	P	**Australia** Incorrect reference, Hallman 2004 does not say this statement. It is the Hallman et al 2013 studies that included the comparison of species. *Category : EDITORIAL*	**Incorporated** Reference will be corrected
18	43	The efficacy of this schedule was calculated based on a total of 58 779 fifth-instar larvae of *Grapholita molesta* treated with no viable adult emergence; the control emergence was 94.~~8%~~8% (Hallman 2004). The data	P	**Australia** Missing reference, Hallman 2004 had the research using 58779 first instar larvae and should be referenced accordingly. *Category : EDITORIAL*	**Incorporated** Correction shall be made

		for *G. molesta* were used as it is considered the most radio-tolerant of the species studied (Hallman, 2004).			
19	43	The efficacy of this schedule was calculated based on a total of 58 779 fifth-instar larvae of *Grapholita molesta* (Busck) treated with no viable adult emergence; the control emergence was 94.8%. The data for *G. molesta* were used as it is considered the most radio-tolerant of the species studied (Hallman, 2004).	P	**Colombia** Include descriptor of the pest Grapholita molesta (Busck). The descriptor is not included within the text in which it is cited *Category : EDITORIAL*	**Considered but not incorporated** Author of the species name need not be included
20	43	The efficacy of this schedule was calculated based on a total of 58 779 fifth-instar larvae of *Grapholita molesta* treated with no viable adult emergence; the control emergence was 94.~~8%~~8% (Hallman, 2004). The data for G. molesta were used as it is considered the most radio-tolerant of the species studied (Hallman et al., 2013).~~*G. molesta* were used as it is considered the most radio-tolerant of the species studied (Hallman, 2004).~~	P	**China** Research with G. molesta reports a dose of 200 Gy (195~232 Gy measured) to prevent adult emergence from irradiated 58,779 fifth instars (the most radiotolerant stage present in fruit) (Hallman, 2004). And Hallman et al. (2013) suggest that G. molesta were used as it is considered the most radio-tolerant of the species studied. *Category : SUBSTANTIVE*	**Incorporated** Correction shall be made as in Comment 17
References					
21	47	The present annex ~~may refer~~ refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at .	P	**European Union** The present annex refers to ISPMs 28 and 18. There is no reason to write "may refer". We understand that this is a general statement for all PTs and this comment may apply to other already adopted PTs. *Category : EDITORIAL*	**Considered but not incorporated** Kept for consistency as is.
22	47	The present annex refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at ~~The present annex may refer to ISPMs. ISPMs are available on the~~	P	**EPPO** The present annex refers to ISPMs 28 and 18. There is no reason to write "may refer". We understand that this is a general statement for all PTs and this comment may apply to other already adopted PTs. *Category : EDITORIAL*	**Considered but not incorporated** (refer to comment 21)

		~~International Phytosanitary Portal (IPP) at~~ .			