



2010-107: Draft vapour heat treatment for *Bactrocera tryoni* on *Mangifera indica*

Comm. no.	Para. no.	Comment type	Comment	Explanation	Country
1.	G	Substantive	I support the document as it is and I have no comments		COSAVE, Australia, New Zealand, Nepal, Thailand, Mexico, Congo, South Africa, Peru, Argentina, Barbados, Brazil, Belize, Ghana, Guyana, Chile
2.	G	Substantive	This draft needs more specific information.	Note: since many varieties are belong to <i>Mangifera indica</i> , than the treatment should specified to specific variety. application and efectifity of vapour heat treatment for <i>Mangifera indica</i> fruit depend on variety, maturity level, size and water content of fruit. This draft needs more specific information.	Indonesia
3.	G	Substantive	Suggest to set specific operational procedures firstly taking example of the irradiation treatments and then draft the standards as annex.	The specific operational procedures should be established as soon as possible, otherwise it can't provide guidance.	China
4.	G	Substantive	This treatment schedule can be applied not for all variety of mango but for only the varieties of var. Kensington Pride, R2E2, Kent, Palmer and Keitt.	Although proposed treatment schedule is effective for five mango varieties (i.e. "Kensington Pride", "R2E2", "Kent", "Palmer" and "Keitt"), efficacy for other cultivars are not presented. For this reason, this treatment can be applied for only five mango varieties. Yoshinaga et al. (2009) and Omura et al. (2014) suggested that the difference of weight or shape caused by mango variety had an effect on the mortality rate in vapour heat treatment. References: Masakuni Yoshinaga, Seiki Masaki and Toshiyuki Dohino. 2009. Vapor heat mortality tests on the eggs of the oriental fruit fly, <i>Bactrocera dorsalis</i> , infesting different sizes and varieties of fresh mango. Res. Bull. Pl. Prot. Japan No. 45: 41-47 Kazutaka Omura, Toshiyuki Dohino, Masahiro Tanno, Isao Miyazaki and Norihito Suzuki. 2014. Vapor Heat Mortality Tests on the Eggs of Oriental Fruit Fly, <i>Bactrocera dorsalis</i> , Infesting Different Fruit Shape of Fresh Mango. Res. Bull. Pl. Prot. Japan No. 50 : 1 -8 Considering these references, when developing the treatment schedule at the species level (not cultivar level), factors	Japan

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				affecting mortality caused by mango variety should be taken into account in order to verify if the proposed treatment schedule achieves the stated efficacy for a wide range of cultivar of mango.	
5.	G	Substantive	I support the document as it is and I have no comments	I support the document as it is and I have no comments	Uruguay
6.	4	Editorial	This treatment comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> to result in the mortality of eggs and larvae (all stages) of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	Change of word to reflect the correct terminology.	Singapore
7.	4	Editorial	This treatment describes comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> to result in the mortality of eggs and larvae (all ages) of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	Suggested edit is for consistency between PTs. Suggest using "describes" rather than "applies to" or "comprises"	Canada
8.	4	Editorial	This treatment comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> to result in the mortality of eggs and larvae (all ages) <u>stages</u> of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	Replace all ages with all stages.	Jamaica
9.	4	Substantive	This treatment comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> <u>var. Kensington Pride, R2E2, Kent, Palmer and Keitt</u> to result in the mortality of eggs and larvae (all ages) of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	Although proposed treatment schedule is effective for five mango varieties (i.e. "Kensington Pride", "R2E2", "Kent", "Palmer" and "Keitt"), efficacy for other cultivars are not presented. For this reason, this treatment can be applied for only five mango varieties.	Japan
10.	4	Substantive	This treatment comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> (<u>all varieties?</u>) to result in the mortality of eggs and larvae (all ages) of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	All varieties of <i>Mangifera indica</i> ?	United States of America
11.	4	Technical	This treatment comprises the vapour heat treatment of fruit of <i>Mangifera indica</i> to result in the mortality of eggs and larvae (all ages) of <i>Bactrocera tryoni</i> (Queensland fruit fly) at the stated efficacy ¹ .	Either delete, assuming all "instars" or replace "ages" with "instars".	United States of America
12.	10	Substantive	Target regulated articles Fruit of <i>Mangifera indica</i> <u>[which stage]</u>	need to indicate if its all stages of <i>Mangifera indica</i> or specific stage.	Kenya
13.	10	Substantive	Target regulated articles Fruit of <i>Mangifera indica</i> <u>var. Kensington Pride, R2E2, Kent, Palmer and Keitt</u>	Although proposed treatment schedule is effective for five mango varieties (i.e. "Kensington Pride", "R2E2", "Kent", "Palmer" and "Keitt"), efficacy for other cultivars are not presented. For this reason, this treatment can be applied for only five mango varieties.	Japan

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14.	10	Substantive	Target regulated articles Fruit of <i>Mangifera indica</i>	Mango is a fleshy fruit and will be affected by the treatment. A study should be conducted to evaluate the effect of those treatments on the fruit natural properties in parallel with the effect of those treatments against pests. The basis of any treatment immediate is to eliminate pests while maintaining the natural properties for mango fruits	Bahrain
15.	15	Substantive	for at least 144minutes two hours and until mean fruit core temperature reaches 47 °C	According to "Queensland Department of Primary Industries (1999)" the duration until starting holding time is 144 minutes. If the mean temperature is used, fruit that is lower than mean temperature may not be treated at the prescribed temperature, which can result in failure treatment.	Japan
16.	15	Technical	for at least two hours and until mean fruit core temperature reaches 47 °C <u>It is not clear for the expression of the average core temperature index. And how to calculate the mean fruit core temperature? It suggests to explain the details in the draft.</u>	The mean fruit core temperature should be the average of several temperature probes. The explanation for the mean fruit core temperature is necessary in the draft.	China
17.	16	Substantive	followed by 15 minutes at a minimum of 95% relative humidity in an air temperature of 48 °C and with mean fruit pulp temperature at a minimum of 47 °C lack information on arrangement of mangoes .	should give details on set up of treatment.	Kenya
18.	16	Substantive	followed by 15 minutes at a minimum of 95% relative humidity in an air temperature of 48 °C and with mean fruit core pulp temperature at a minimum of 47 °C.	If the mean temperature is used, fruit that is lower than mean temperature may not be treated at the prescribed temperature, which can result in failure treatment. Temperature should be measured at the point of lowest temperature to ensure the efficacy.	Japan
19.	16	Technical	followed by 15 minutes at a minimum of 95% relative humidity in an air temperature of 48 °C and with mean fruit pulp temperature at a minimum of 47 °C. <u>Add after the sentence: Dwell recording interval, and the dwell recording interval should be 1 minute.</u>	Add recording interval may benefit to confirm the treatment effect.	China
20.	16	Technical	followed by 15 minutes at a minimum of 95% relative humidity in an air temperature of 48 °C and with mean fruit pulp temperature at <u>maintaining</u> a minimum of 47 °C.	Does this mean reaching the temperature or maintaining the temperature for a certain time period?	United States of America
21.	17	Editorial	Once the treatment is complete, fruit may be air-cooled or cooled by an ambient temperature water drench.	Addition of a comma suggested for clarity.	EPPO, European Union, Austria

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22.	17	Technical	Once the treatment is complete fruit may be air-cooled or cooled by an ambient temperature water drench.	Any specifics as to for how long or until certain temperature is reached within the fruit? Drench – is there alternative wording that can be used for “drench”? Drenching implies that water is being absorbed or soaking.	United States of America
23.	18	Substantive	The efficacy is effective dose (ED) _{99.998} at the 95% confidence level.	It is suggested to clarify which reference was referred to calculate ED.	Japan
24.	18	Technical	this treatment schedule achieves a 99.998% level of mortality for eggs and larvae of <i>bactrocera tryoni</i> at the 95% confidence level. The efficacy is effective dose (ED)_{99.998} at the 95% confidence level.	At its 2014 June meeting, the TPPT agreed to use simplified wording that was then modified to be expressed as a percentage by the MAY 2015 SC..	EPPO, European Union, Austria
25.	20	Editorial	In evaluating this treatment, the Technical Panel on Phytosanitary Treatments considered issues associated with temperature regimes and thermal conditioning, taking into account the work of Hallman and Mangan (1997).	Addition of a comma suggested for clarity.	EPPO, European Union, Austria
26.	20	Technical	In evaluating this treatment the Technical Panel on Phytosanitary Treatments considered issues associated with temperature regimes and thermal conditioning, taking into account the work of Hallman and Mangan (1997).	"considered issues associated..." It is not clear what the "issues" were. Either elaborate or rephrase.	United States of America
27.	24	Substantive	Corcoran, R.J., Jordan, R.A., Peterson, P.M., Eelkema, M., Heslin, L.M. & Jen, E.V. 2000. <i>Disinfestation of additional mango varieties for export to Japan</i> . Gordon, Australia, Horticultural Research & Development Corp. <u>The data used for VHT in this draft did not come from openly publication. It is difficult to comment the treatment schedule.</u>	The references is difficult to find where tests procedure and treatment schedule can not be easily understood.	China
28.	26	Substantive	Heather, N.W., Corcoran, R.L., Heard, T., Jacobi, K. & Coates, L. 1991. <i>Disinfestation of mangoes against Queensland fruit fly by vapour heat</i> . A Queensland Department of Primary Industries report to the Japanese Ministry of Agriculture, Forestry and Fisheries through Commonwealth of Australia Department of Primary Industries and Energy. <u>The data used for VHT in this draft did not come from</u>	The references is difficult to find where tests procedure and treatment schedule can not be easily understood.	China

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29.	27	Editorial	Heather, N.W., & Hallman, G.J. 2008. <i>Post managment and phytosanitary trade barriers</i>. Wallingford, UK, CAB International. 257 pp.	This reference is not quoted in the text.	EPPO, European Union, Austria
30.	28	Substantive	<p>Heather, N. W., Jordan, R. & Corcoran, R.J. 1994. <i>Verification trials for vapour heat disinfestation of mangoes infested with fruit flies</i>. A Queensland Department of Primary Industries report to the Japanese Ministry of Agriculture, Forestry and Fisheries through Commonwealth of Australia Department of Primary Industries and Energy.</p> <p>The data used for VHT in this draft did not come from openly publication. It is difficult to comment the treatment schedule.</p>	The references is difficult to find where tests procedure and treatment schedule can not be easily understood.	China
31.	29	Substantive	<p>Queensland Department of Primary Industries. 1999. <i>Verification trial against Queensland fruit fly, Bactrocera tryoni (Frogatt), in Keitt mangoes using vapour heat treatment</i>. A Queensland Department of Primary Industries report to the Japanese Ministry of Agriculture, Forestry and Fisheries through Commonwealth of Australia Department of Primary Industries and Energy.</p> <p>The data used for VHT in this draft did not come from openly publication. It is difficult to comment the treatment schedule.</p>	The references is difficult to find where tests procedure and treatment schedule can not be easily understood.	China