

DRAFT ANNEX TO ISPM 28: VAPOUR HEAT TREATMENT FOR *BACTROCERA MELANOTUS* AND *BACTROCERA XANTHODES* ON *CARICA PAPAYA* (2009-105)

Status box	
This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption.	
Date of this document	2015-11-05
Document category	Draft Annex to ISPM 28 (<i>Phytosanitary treatments for regulated pests</i>)
Current document stage	<i>To CPM for adoption</i>
Major stages	<p>2009 High temperature forced air treatment for selected fruit fly species (Diptera: Tephritidae) on fruit (2009-105) submitted</p> <p>2010-07 Technical Panel on Phytosanitary Treatments (TPPT) reviewed treatment and requested additional information</p> <p>2012-12 TPPT requested additional time for evaluation</p> <p>2013-07 TPPT changed the title to High temperature forced air treatment for <i>Bactrocera melanotus</i> and <i>B. xanthodes</i> on <i>Carica papaya</i> (2009-105) and recommended to Standards Committee (SC) for member consultation (MC)</p> <p>2013-09 TPPT approved treatment schedule (virtual meeting)</p> <p>2014-02 SC e-decision for approval for MC</p> <p>2014-03 Secretariat applied changes suggested by forum and opened poll</p> <p>2014-03 SC approved draft treatment for MC via poll (2014_eSC_May_02)</p> <p>2015-02 Member consultation comments under review by TPPT</p> <p>2015-05 TPPT May virtual meeting</p> <p>2015-09 TPPT September meeting</p> <p>2015-10 SC approved draft treatment for adoption by CPM-11 (2015_eSC_Nov_07)</p>
Treatment lead	<p>2015-02 Mr Daojian YU (CN)</p> <p>2009-01 Mr Andrew JESSUP (AU)</p>
Secretariat notes	<p>2013-09 Formatted in accordance with new requirements</p> <p>2013-09 Secretariat started using previously revised footnote related to treatment adoption</p> <p>2014-04 Edited</p> <p>2015-09 TPPT invited the SC to note change in title of this draft PT to "Vapour heat treatment for <i>Bactrocera melanotus</i> and <i>Bactrocera xanthodes</i> on <i>Carica papaya</i> (2009-105)" (pending SC approval)</p> <p>2015-09 Inclusion of reference "Waddell et al., 1993"</p> <p>2015-09 Edited</p>

Scope of the treatment

- [1] This treatment comprises the treatment of fruit of *Carica papaya* in a high temperature forced air chamber to result in the mortality of eggs and larvae of *Bactrocera melanotus* and *Bactrocera xanthodes* (Pacific fruit fly) at the stated efficacy¹.

¹ The scope of phytosanitary treatments does not include issues related to pesticide registration or other domestic requirements for contracting parties' approval of treatments. IPPC adopted treatments may not provide information on specific effects on human health or food safety, which should be addressed using domestic

Treatment description

- [2] **Name of treatment** Vapour heat treatment for *Bactrocera melanotus* and *Bactrocera xanthodes* on *Carica papaya* (2009-105)
- [3] **Active ingredient** N/A
- [4] **Treatment type** Physical (vapour heat)
- [5] **Target pests** *Bactrocera melanotus* (Coquillett) (Diptera: Tephritidae) and *Bactrocera xanthodes* (Broun) (Diptera: Tephritidae)
- [6] **Target regulated articles** Fruit of *Carica papaya* L.

Treatment schedule

- [7] Exposure in a forced air chamber:
- at a minimum of 60% relative humidity
 - with air temperature increasing over a minimum of 3.5 hours from room temperature to 48.5 °C or above
 - with air temperature held at 48 °C or above for a minimum of 3.5 hours
 - with all fruit within the chamber maintaining a core temperature of 47.5 °C or above, for a minimum of 20 minutes.
- [8] Once the treatment is complete, the fruit may be cooled (e.g. by hydro-cooling) to a core temperature of 30 °C in a period of time of no less than 70 minutes.
- [9] There is 95% confidence that the treatment according to this schedule kills not less than 99.9914% of eggs and larvae of *B. melanotus* and *B. xanthodes*.

Other relevant information

- [10] In evaluating this treatment the Technical Panel on Phytosanitary Treatments (TPPT) considered the technical justification for including other pest tephritid fruit flies (*Anastrepha ludens* (Loew), *Anastrepha suspensa* (Loew), *Bactrocera cucurbitae* (Coquillett), *Bactrocera dorsalis* (Hendel), *Bactrocera facialis* (Coquillett), *Bactrocera kirki* (Froggatt), *Bactrocera passiflorae* (Froggatt), *Bactrocera psidii* (Froggatt), *Bactrocera tryoni* (Froggatt) and *Ceratitis capitata* (Wiedemann)) and other fruit crops (all fruit hosts of tephritid fruit flies) in the treatment description as originally submitted. The TPPT recommended, however, including only two pest tephritid fruit flies, *B. melanotus* and *B. xanthodes*, for only one fruit crop, *C. papaya*, based on Waddell *et al.* (1993).
- [11] The fruit crop used to develop the schedule was *C. papaya* . Waimanalo Solo.

References

- [12] **Waddell, B.C., Clare, G.K., Mairdonald, J.H. & Petry, R.J.** 1993. Postharvest disinfestations of *Bactrocera melanotus* and *B. xanthodes* in the Cook Islands. Report 3. Wellington, Ministry of Agriculture and Fisheries (New Zealand) – Regulatory Authority pp.1-44.

procedures prior to contracting parties approving a treatment. In addition, potential effects of treatments on product quality are considered for some host commodities before their international adoption. However, evaluation of any effects of a treatment on the quality of commodities may require additional consideration. There is no obligation for a contracting party to approve, register or adopt the treatments for use in its territory.