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 (Phytosanitary treatments for regulated pests)

Current document stage To CPM for adoption

Major stages

2009 High temperature forced air treatment for selected fruit fly species (Diptera: Tephritidae) on fruit (2009-105) submitted
2010-07 Technical Panel on Phytosanitary Treatments (TPPT) reviewed treatment and requested additional information
2012-12 TPPT requested additional time for evaluation
2013-07 TPPT changed the title to High temperature forced air treatment for *Bactrocera melanotus* and *B. xanthodes* on *Carica papaya* (2009-105) and recommended to Standards Committee (SC) for member consultation (MC)
2013-09 TPPT approved treatment schedule (virtual meeting)
2014-02 SC e-decision for approval for MC
2014-03 Secretariat applied changes suggested by forum and opened poll (2014_eSC_May_02)
2015-02 Member consultation comments under review by TPPT
2015-05 TPPT May virtual meeting
2015-09 TPPT September meeting
2015-10 SC approved draft treatment for adoption by CPM-11 (2015_eSC_Nov_07)

Treatment lead 2015-02 Mr Daojian YU (CN)
2009-01 Mr Andrew JESSUP (AU)

Secretariat notes

2013-09 Formatted in accordance with new requirements
2013-09 Secretariat started using previously revised footnote related to treatment adoption
2014-04 Edited
2015-09 TPPT invited the SC to note change in title of this draft PT to “Vapour heat treatment for *Bactrocera melanotus* and *Bactrocera xanthodes* on *Carica papaya* (2009-105)” (pending SC approval)
2015-09 Inclusion of reference “Waddell et al., 1993”
2015-09 Edited

Scope of the treatment

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.

¹The 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


[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* Waianalolo, Waimanalo Solo.

References