Queensland Government

Department of
Agriculture and Fisheries

Our ref: CTS 16323/23

25/09/2023

Mrs Monica Collins
First Assistant Secretary
Biosecurity Plant and Science Services Division
Department of Agriculture, Fisheries and Forestry
imports@agriculture.gov.au

Dear Mrs Collins

Thank you for your letter of 17 July 2023, regarding the Department of Agriculture, Fisheries and Forestry (DAFF) request for submissions on the 'Passionfruit from Vietnam: biosecurity import requirements draft report' (the draft report).

The Queensland Department of Agriculture and Fisheries (DAF) has reviewed the draft report and notes that DAFF has identified 11 pest species of biosecurity concern for Australia that have the potential to be associated with fresh passionfruit from Vietnam. The department agrees that the unrestricted risk estimates for these pests exceed Australia's appropriate level of protection, and therefore additional biosecurity measures to mitigate these risks are required.

In addition, DAF has identified another pest, *Frankliniella schultzei*, that has the potential to be associated with the passionfruit import pathway and to introduce potential quarantine tospoviruses into Australia (details are provided in the attached DAF comments to the draft report, and the attached report of *Frankliniella schulzei* thrips in passionfruit skin). DAF suggests that the risk posed by *F. schultzei* be considered as part of the DAFF biosecurity import risk assessment process, and appropriate actions be taken to mitigate any risks identified.

The department notes that DAFF has proposed risk mitigation measures for the 11 pests that are consistent with the existing import policies for similar pests associated with various fresh fruit from several countries, including China, Chile, Indonesia, Japan, Korea, Taiwan, the United States of America and Vietnam.

The department supports the risk mitigation measures proposed in the draft report, including pest free areas or pest free places of production or fruit treatment for fruit flies and consignment freedom verified by pre-export visual inspection and remedial action for thrips species and spider mites, if detected.

1 William Street Brisbane
GPO Box 46 Brisbane
Queensland 4001 Australia
Business Centre 13 25 23
Website www.daf.qld.gov.au
ABN 66 934 348 189

Thank you for the opportunity to comment on the draft report. DAF would appreciate involvement in any further review processes leading to the finalisation of this report, and to be kept informed of any potential biosecurity risks that are identified after the policy is in place.

If you require any further information, please contact Dr Abu-Baker Siddique, Senior Scientist, in the Department of Agriculture and Fisheries, on 07 3708 8506 or email at Abu-baker.Siddique@daf.qld.gov.au.

Yours sincerely

Dr Chris Sarra
Director-General
Department of Agriculture and Fisheries

Att (2)

1. QDAF comment on the Passionfruit BIRA report for DAFF
2. Report of *Frankliniella schultzei* thrips in passionfruit skin for DAFF

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The Department of Agriculture and Fisheries (DAF), Queensland comments on
'Passionfruit from Vietnam: biosecurity import requirements draft report'

Frankliniella schultzei (Trybom, 1910); Preferred common name: Cotton thrips

Known facts about *F. schultzei*

- *Frankliniella schultzei* (commonly known as cotton thrips) is highly polyphagous and has been recorded from 83 plant species from 35 families (Palmer 1990).
- *F. schultzei* is a known vector of tospoviruses (CABI Datasheet 2021).
- The adults and nymphs are known to feed on pollen and floral tissues.
- International trade associated with infested plant material is considered the potential movement pathway of *F. schultzei*.
- *F. schultzei* is reported worldwide in Africa, Asia, Australia and South Pacific, Central America and Caribbean, Europe, North America, and South America (Kakkar *et al*. 2017).
- Most distribution records do not include Vietnam as part of the pest distribution. However, *F. schultzei* was reported in Vietnam by Pushkova and Kasatkin (2020). It is considered the first report in Vietnam.
- There are no known records at this time of tospoviruses vectored by *F. schultzei* from Vietnam.
- *F. schultzei* is known to be a species complex, i.e., possibly consisting of multiple species. Among these, at least three species are present in Australia and potentially six species may be present globally (Hereward *et al.* 2017).
- Tospovirus transmission efficiency by thrips varies from species to species. Therefore, the economic impact of tospovirus transmission is strongly influenced by the type of tospovirus, the thrips species and their transmission efficiency.
- The PRA process revealed that passionfruit is the potential pathway for thrips (*Scirtothrips dorsalis*and and *Thrips palmi*) to enter Australia, and both the thrips have the potential for distribution, establishment, spread and the economic consequences in Australia (Draft passionfruit BIRA report 2023, page 44).

Unknown

- Given that *F. schultzei* is reported to be a species complex comprising six species globally (Hereward et al. 2017), it is unknown if the *F. schultzei* in Vietnam is the same species as the *F. schultzei* found in Australia.
- It is also unknown what tospoviruses are transmitted by *F. schultzei* in Vietnam. Are they the same as in Australia or different?

New facts about *F. schultzei* (Source: Newton J, DAF, pers com., 2023)

- *F. schultzei* is reported to infest passionfruit skin in Far North Queensland.

- The thrips were detected in galls or small bumps/lumps (less than 1mm) on the outer fruit skin of passionfruit collected from a farm in Mareeba.
- Dissection of the galls revealed eggs of thrips, which were thought to cause the gall formation.
- The thrips eggs found in the flower tissue and developing fruit are the same in the flowers.

Based on the above known and new facts, DAF concludes -

- Passionfruit is a potential pathway for *F. schultzei* to enter Australia.
- *F. schultzei* has the potential for distribution, establishment, and spread in Australia, which can result in economic consequences for Australian industries, as indicated by the PRA process of other thrips in the draft BIRA report of passionfruit importation from Vietnam.
- Tospoviruses in Vietnam that are exotic to Australia can be carried and vectored by thrips. Economic impacts on Australian agriculture will result after the viruliferous thrips enter Australia via the passionfruit import pathway, and establishment and spread.
- While later stages of gall formation should be detected visually, early gall stages under passionfruit skin caused by *F. schultzei* can readily be missed by visual inspection during the importation risk mitigation process.

DAF believes *F. schultzei* in Vietnam may or may not be a different species from that present in Australia. As a potential vector of quarantine tospoviruses, the pest poses a biosecurity threat to Australia's agricultural industries. DAF therefore recommends that the risk posed by *F. schultzei* in Vietnam be thoroughly investigated and consideration be given to all effective risk mitigation measures required to reduce the associated risks to Australia's appropriate level of protection (ALOP) during the importation of passionfruit from Vietnam.

References

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Report of *Frankliniella schultzei* thrips in passionfruit skin

Ian Newton, Principal Entomologist, Horticulture and Forestry Science, Department of Agriculture and Fisheries, Mareeba, Queensland.
14 September 2023.

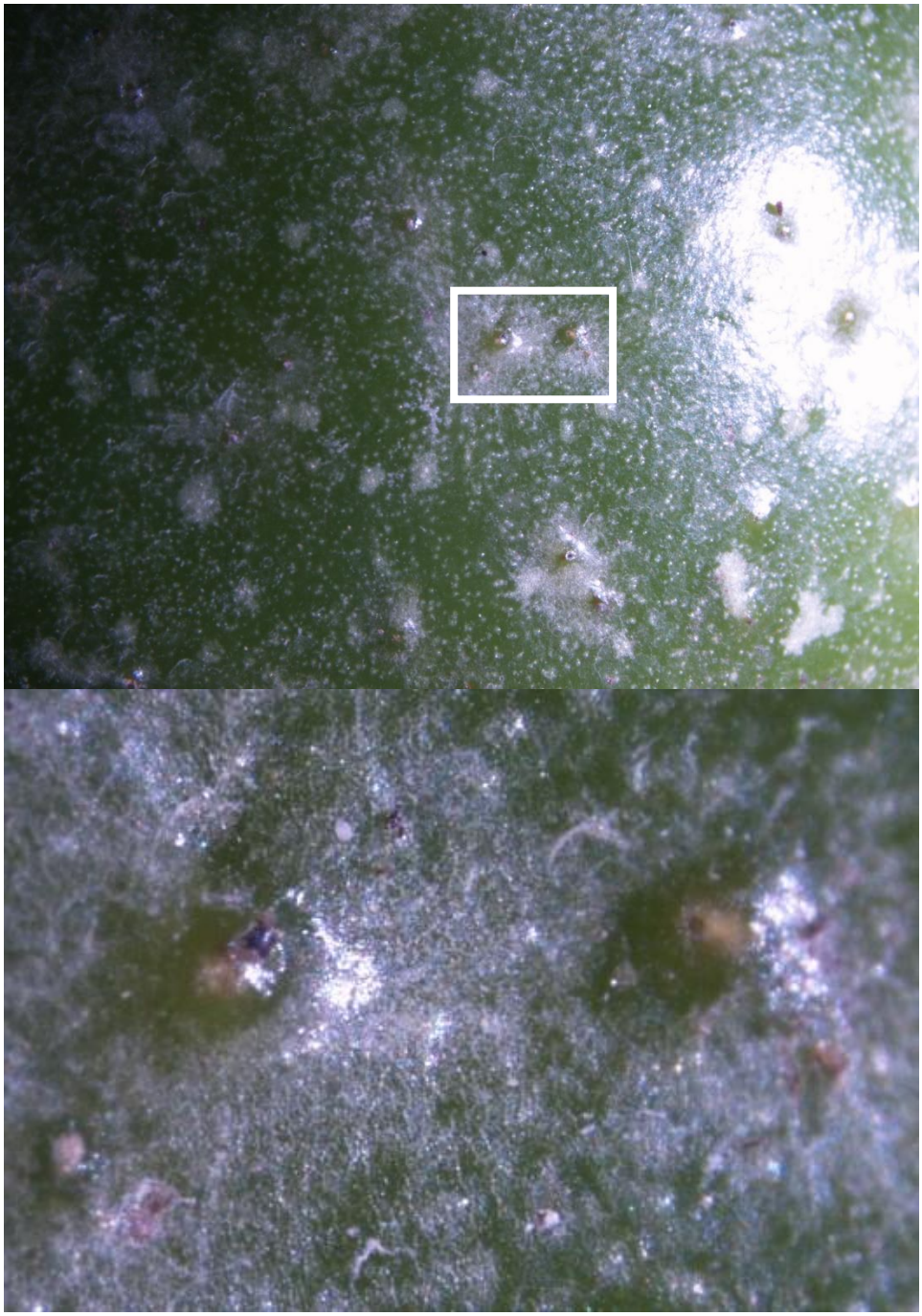
This report confirms that thrips *Frankliniella schultzei* have previously been found in passionfruit skin in far north Queensland.

In June 2018, I investigated galls (or small bumps/lumps) on the outer fruit skin of passionfruit collected from a farm at Mareeba. The galls were very small, less than 1mm.

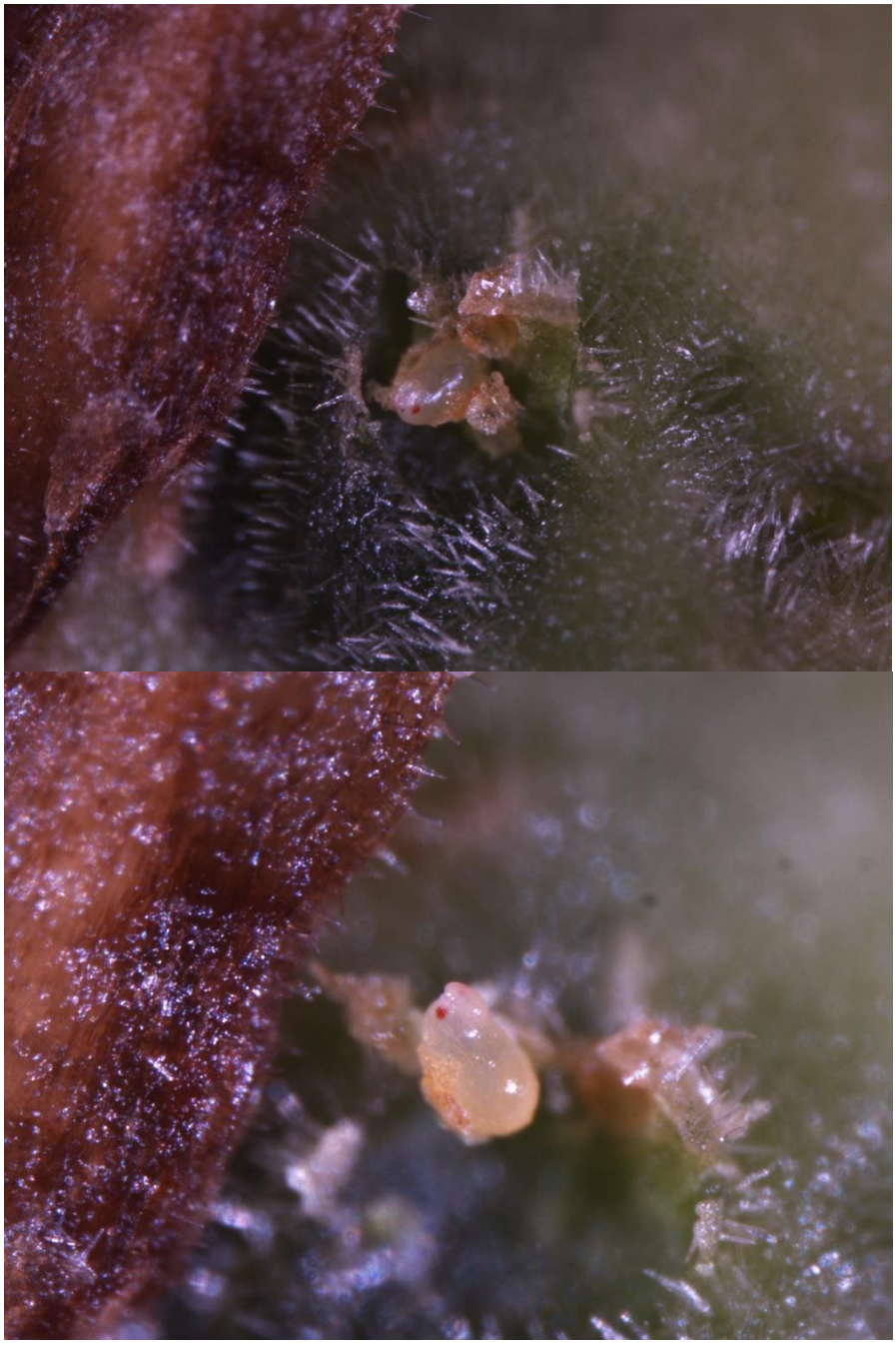
Dissection of the galls revealed eggs of thrips, which were thought to cause the galls (see photos below). Subsequent field inspections and collections of passionfruit flowers, found high numbers of common blossom thrips *Frankliniella schultzei* developing in the flowers; eggs were found in the flower tissue and developing fruit. Adult thrips were identified by Jodie Cheesman (entomologist, DAF Mareeba) under microscope by slide mounting. The thrips eggs found in the fruit skin were thought to be the same as the eggs found in the flowers.

Frankliniella schultzei, are part of a species complex (many close related species or sub-species with no clear boundaries between them) and are known to vector plant viruses.

The following pages contain photographs taken at the time of collection.



Small galls, or small lumps found on passionfruit skin.



Dissection of galls: Thrips eggs found in galls.

Thrips egg dissected from gall in passionfruit skin.

Thrips developing in passionfruit flower tissue

Adult thrips *Frankliniella schultzei* found in passionfruit flowers.