



Food and Agriculture
Organization of the
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International
Plant Protection
Convention



IPPC Global Workshop on Systems Approaches

Santiago, Chile
1 – 4 December 2025

In partnership with:



Australian Government
Department of Agriculture,
Fisheries and Forestry

Systems Approach for the Export of Korean Grapes to Australia

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Animal and Plant Quarantine Agency



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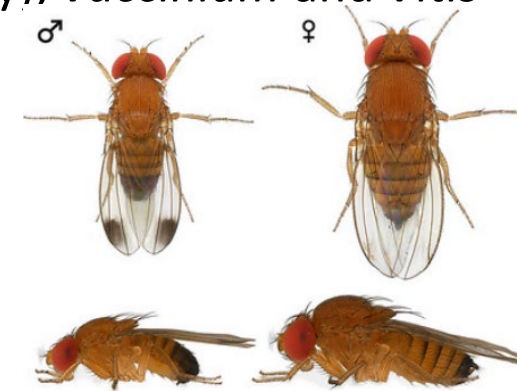
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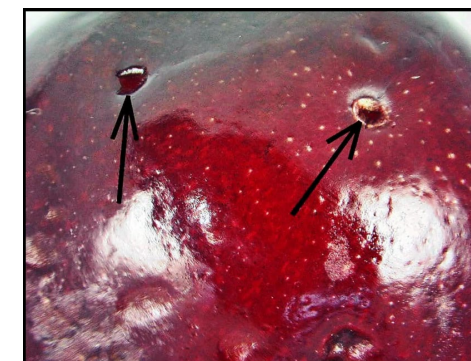


Pest Overview: *Drosophila suzukii*

- Occurs in more than **50 countries across 5 continents**
- Over 100 plant species have been reported as host, including *Rubus*, *Prunus*(cherry), *Vaccinium* and *Vitis*
- Damage : Lay eggs in **undamaged, ripening fruit**
- Economic impact :
 - Fruit unmarketable, causing severe economic losses
 - California, Oregon, Washington state (Cherry, Blueberry, etc.)
 - Italy, Spain, France (Cherry, Raspberry, Grapes, etc.)
- South Korea is **native to SWD**, but damage in production areas is **insignificant**.



Citation: DAFF



Damage to cherry fruit from female
oviposition



Design of the Systems Approach

- Target grape varieties
 - Campbell Early, Kyoho, Shine Muscat (less preferred cultivars)

- Key concept of SA

Registration of orchards, packing houses → Fruit Bagging →

Monitoring → Sanitation → Inspection → Cold treatment

- NPPO register and supervise the entire process
 - Grapes produced under the systems approach are certified as

"This fruit has been produced under the systems approach for *Drosophila suzukii*"



Campbell



Kyoho



Shine Muscat



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Pre-Harvest Measures

- Orchard and Grower Management (**NPPO**)
 - **Registration** of export orchards and participating growers (every year)
 - Implementation of a **pest management program**
- Training and Technical guidance (**NPPO**)
 - NPPO provide **training on identification and control of SWD damage** to grower and packing house staff



Grower training by the NPPO



Pre-Harvest and Harvest Measures

■ Fruit Bagging

- Bags are applied when grape reach **8-10mm diameter** or soon after the thinning of the berry

■ Trap monitoring (NPPO)

- Vinegar/Wine baited traps are installed as follow:
 - 2 traps for orchards ≤ 0.5 ha, and 1 additional trap for each extra ≤ 0.5 ha
- Trap installed **4 weeks before harvest**, **check weekly** until harvest (**minimum 4 times**)



■ Orchard Sanitation

- Remove fallen fruits and weed control

■ Harvest operation

- Grape bags **must remain until harvest** and **must remain intact until the fruit enter the packing house**





Post-Harvest Measures

■ Packing house operations

- Grapes must be covered with a mesh (≤ 0.98 mm aperture, ≥ 0.16 mm thickness) during transport from orchard to packing house
- At least **4 traps are installed and checked daily**
- Maintain temperature below 14 °C (Recommended 10-11 °C)

■ Packaging

- Ventilation holes of the boxes are covered with **mesh ≤ 0.98 or sealed plastic film**
- Use mesh or plastic coverings over pallet units





Harvest & Post-Harvest Measures

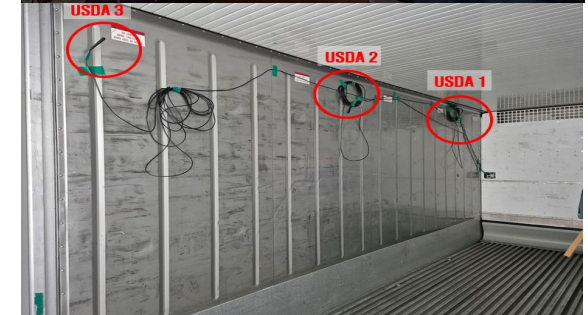
■ Export Inspection (NPPO)

- NPPO inspect 600 bunches per lot
- SWD found, **shipment reject + grower suspended** rest of the season

■ Cold treatment (NPPO)

- Conducting the cold treatment on land or during transport
- Sensors calibration, recording of fruit pulp temperature
in process conducted under supervision of NPPO

| | |
|-----------------------------|---------|
| $\leq 0^{\circ}\text{C}$ | 10 days |
| $\leq 0.56^{\circ}\text{C}$ | 11 days |
| $\leq 1.11^{\circ}\text{C}$ | 12 days |
| $\leq 1.67^{\circ}\text{C}$ | 14 days |





Different Risk Reduction Objectives

Minimise exposure

- Monitoring (Orchard+Packing house)
- Sanitation
- Transport fruit with cover
- Contamination prevention
- Fruits bagging
- Remove fallen fruits

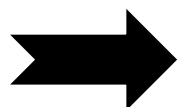
Minimise host vulnerability

- Less preferred hosts

Reduce infestation rate

- Insecticide treatment
- Cold treatment

**Inspection
of
600 fruits**



Independent measures provide an appropriate level of effectiveness



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Thank you