

# SCALE INSECTS

# PEST (AIRBORNE)

| TYPE                                               | FREQUENCY   | SERIOUSNESS       | ATTENTION | STAGE             | RISK FACTORS   | SUITABLE FOR FRESH SALE |
|----------------------------------------------------|-------------|-------------------|-----------|-------------------|----------------|-------------------------|
| Red Scale                                          | Common      | Major             | Special   | Stem, Leaf, Fruit | Spread by wind | Grade 2 Only            |
| Hemispherical Scale                                | Less Common | Potentially Major | Special   | Stem, Leaf, Fruit | Spread by wind | N/A                     |
| Other Scale: Green Coffee, Soft Brown, White Peach | Not Common  | Minor             | Special   | Stem, Leaf, Fruit | Spread by wind | N/A                     |

## RED SCALE IDENTIFICATION (REQUIRES HAND LENS)

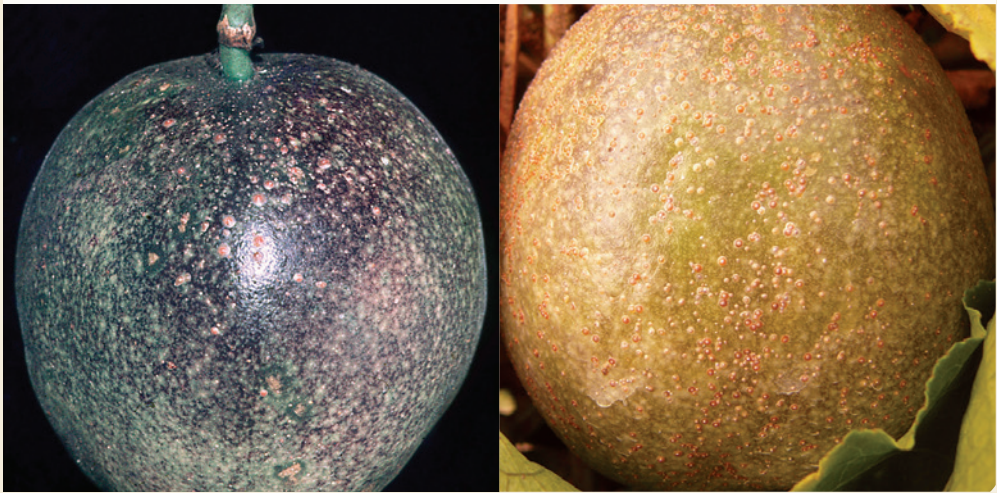
### STEMS & LEAVES

- Red scale has a thin, circular, leathery covering over the soft, flattened shield shaped insect
- 2mm diameter (female), smaller, paler and elongated (male)
- Stem surface appears dirty and uneven
- Scrape with fingernail to reveal reddish-brown waxy scale insects



### FRUIT

- Appears as small pale pink to red slightly raised spots 1mm diameter on fruit
- If fruit is infected, then stem will have scale present too



RED SCALE IS TOXIC TO VINES AND HEAVILY INFESTED VINES WILL DIE. RED SCALE IS A MAJOR CAUSE OF POOR GROWTH OR SHORT LIFE OF VINES.

## RISKS

- There are 4-6 generations per year across spring, summer, autumn in Qld and NSW
- Each adult female produces 150 'crawlers' which disperse across the vine seeking feeding sites
- Crawlers can be blown by the wind from vine to vine if they have not yet settled
- Once settled, adult female scale insects do not move again
- Populations can build up rapidly due to the large number of crawlers produced
- Once established, populations are impossible to eradicate, but can be managed using natural beneficial insects provided they are not disrupted by the use of broad-spectrum insecticides in your orchard

## MANAGEMENT

### BEFORE PLANTING:

- Completely remove and destroy any old scale infested plants, particularly upwind of planting sites
- Check new plants thoroughly for any signs of scale and if present, treat the plants with a chemical currently registered for use against red scale in passionfruit prior to planting

### YOUNG VINES:

- Monitor stems carefully during first 6 months as this is where red scale will first appear
- Clearly mark any infected plant with flagging tape then thoroughly spot spray the infected plant only, with a chemical currently registered for use against red scale in passionfruit

### BEARING VINES:

- Continue to monitor stems as part of your regular orchard monitoring, but also check laterals and leaves
- Monitoring should include an assessment of beneficial insect populations
- Ants can be disruptive and should be managed if present in high numbers with an ant control agent like Distance Plus Ant Bait
- Multiple types of beneficial insects are available for release to boost biocontrol in your orchard
- As a last resort, spot treat highly infected plants with an insecticide registered for use in passionfruit
- For more information on red scale, refer to Page 126 of the Passionfruit Growing Guide