

Most unwanted

Be familiar with the common pests and diseases in your orchard so you can distinguish them from exotic organisms.
Report any suspected exotic organisms.



Peach twig borer (*Anarsia lineatella*)

- Major pest of peaches, nectarines, apricots and plums.
- Very similar damage to the attack of oriental fruit moth.
- Present in Europe, Middle East, North Africa & North America.
- The first sign of its presence may be wilting or flagging of new growth in spring time. Later generations can damage the fruit.
- Larvae are 12mm long and adults are 8-12mm long.

Photo – H. Audemard, INRA, Montfavet, Bugwood.org



Oriental fruit fly (*Bactrocera dorsalis*, *B. papayae* & *B. carambolae*)

- OFF is a fruit fly complex of three very similar *Bactrocera* species.
- Major pest of summerfruit. Highly invasive, attacking over 300 hosts.
- Present in South Asia, Indonesia, Kenya, Tanzania, California & Hawaii.
- Fruit damage occurs when larvae feed inside the fruit causing rots through secondary infections.
- Larvae are 7.5-10mm long, adults are 6-8mm long.

Photo – Scott Bauer, ARS - USDA



Queensland fruit fly (*Bactrocera tryoni*)

- QFF is the most damaging horticultural pest in Australia.
- Affects all summerfruit.
- Found in NSW, NT, Qld & Vic. Also, New Caledonia & French Polynesia.
- Fruit damage is caused by larvae feeding inside the fruit followed by pulp decay due to secondary fungal and bacterial infections.
- QFF larvae are 9mm long and adults are 7mm long.

Photo – G.T. O'Loughlin, Department of Agriculture, Bugwood.org



Peach fruit fly (*Bactrocera zonata*)

- Polyphagous species with a very high reproductive potential. Peaches are the main summerfruit affected by this fruit fly.
- Produces several generations in a year with a rapid dispersal ability.
- Present in South Asia & North East Africa.
- Damage typical of other fruit flies.
- Larvae are 7-10mm long, adults are 5-6mm long.

Photo – Viwat Wornayporn / IAEA



Mediterranean fruit fly (*Ceratitis capitata*)

- All commercial summerfruit affected through larvae feeding on flesh and pulp decay caused by secondary pathogens.
- High economic impact affecting production costs and market access.
- Medfly is a highly invasive pest present in several countries across Europe, Africa & South America. It is also present in Western Australia.
- Traps baited with male lures can be used to monitor Medfly where present.
- Medfly adults are 3-5mm long and larvae are 7-8mm long.

Photo – Scott Bauer, ARS - USDA, Bugwood.org



Plum curculio (*Conotrachelus nenuphar*)

- Presence restricted to the east of the Rocky Mountains in the USA.
- All commercial summerfruit and apples are potential hosts.
- Damage caused through feeding and oviposition. Larvae feeding causes internal pulp damage and exit holes on the skin.
- Oviposition leaves a half-moon shaped scar. Damaged fruit drops early.
- Larvae are white with a brown head, curved and legless. They are 6-9mm long and adults are 5mm long.

Photo – E. Levine, The Ohio State University, Bugwood.org



Spotted wing drosophila (*Drosophila suzukii*)

- SWD is a serious economic threat to cherries and other soft summerfruit.
- Native to Asia, present in North America, Europe, Chile & Argentina.
- High reproductive capacity and dispersal ability. 13 generations per year.
- SWD larvae cause damage by feeding on the pulp inside fruit. The oviposition scars are a point of entry for secondary pathogens causing rots.
- SWD adults are 2-3mm long. Males have spots on their wings.

Photo – McEvey, Shane (2017), Australian Museum



Brown marmorated stink bug (*Halyomorpha halys*)

- A major nuisance in USA mid-Atlantic and Pacific Northwest regions.
- Polyphagous and highly invasive, serious losses on apples and peaches.
- Present in Europe, USA, Chile, Japan, Korea & Taiwan.
- Feeding injuries produce sunken areas of damage. Chemical control has resulted in increased use of sprays causing secondary outbreaks.
- BMSB present five nymphal stages. Adults are 12-17mm long.

Photo – David R. Lance, USDA APHIS PPQ, Bugwood.org



European brown rot (*Monilinia fructigena*)

- Not as bad as other *Monilinia* but has serious effects on market access.
- Currently present in many countries in Europe and Asia.
- It spreads readily by means of *Conidia* carried by the wind or insects.
- Infections start with the flowers and continue on mature fruit.
- Symptoms on ripe fruits are small, circular brown spots that quickly begin rotting.

Photo – Rasbak 2010



Asian brown rot (*Monilinia polystroma*)

- Initially known only in Japan. Currently in Europe and parts of Asia.
- Dispersal most likely to occur through infected stock or fruit.
- Causes very similar symptoms to other *Monilinia* pathogens.
- Can only be distinguished from other brown rots by laboratory testing.
- Disease incidence can significantly be reduced by removing rotten/mummified fruit early in the season.

Photo – Algirdas 2006



Sharka disease (*Plum pox virus*)

- One of the most destructive diseases of summerfruit.
- PPV is easily transmitted by many aphid species and nursery grafting and affects all commercial summerfruit species.
- Present in Europe, Asia, Chile, Canada & Argentina.
- Symptoms vary widely causing chlorotic spots on leaf and fruit deformity.
- Where possible, work only with certified plant propagation material.

Photo – European and Mediterranean Plant Protection Organization, Bugwood.org



European cherry fruit fly (*Rhagoletis cerasi*)

- The most important pest of cherries in Europe. Also found in Asia.
- Tissue around oviposition puncture marks will appear soft and brownish.
- Larvae cause internal feeding damage and rots. Losses may reach 100%.
- Yellow sticky traps are highly recommended to monitor adults.
- Adults are 3.5-4mm long. Larvae third stage are 5-6mm.

Photo – Jeff DeLong



Phony peach disease (*Xylella fastidiosa*)

- Peaches are a major host of *X. fastidiosa* causing phony peach disease.
- Affects xylem vessels blocking transport of mineral nutrients and water.
- Infected peach trees appear more compact, leafier and darker green.
- Production falls and become economically unviable after 3-5 years.
- Sharpshooters are reported as major vectors for this bacterium.
- Control methods include elimination of infected trees and vectors.

Photo – M. Scortichini, Istituto Sperimentale per la Frutticoltura, Rome (IT)

For detailed information, see the **Factsheets** under **Biosecurity** on www.summerfruitnz.co.nz

STOP
To report
any suspected
exotic organism,
call MPI on:

0800 80 99 66

