



SUSTAINABLE PEST AND DISEASE MANAGEMENT UPDATE

**INCLUDING THE OLIVE STRATEGIC AGRICHEMICALS REVIEW
AND THE OLIVE BIOSECURITY PROJECT**

Robert Spooner-Hart

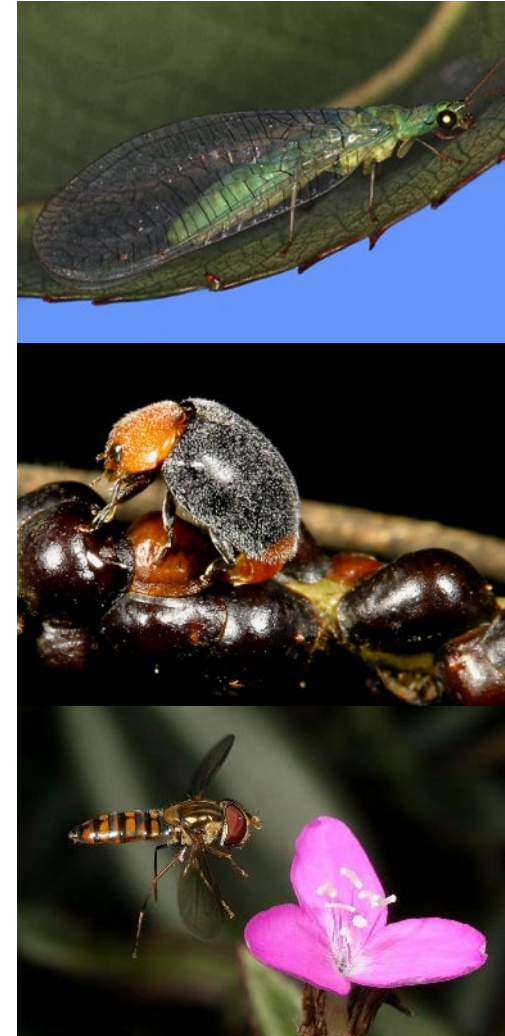
**WESTERN SYDNEY
UNIVERSITY**



Hawkesbury Institute
for the Environment

THE AUSTRALIAN OLIVE INDUSTRY HAS ENDORSED AND ADOPTED INTEGRATED PEST AND DISEASE MANAGEMENT (IPDM)

- Limited, strategic use of selected pesticides can be part of successfully implementing IPDM programs, complementing other strategies
- In most IPM programs, pesticides are normally used only after monitoring indicates they are needed, based on established guidelines such as thresholds



The Strategic Agrichemical Review Process (SARP)

- aims to assess CURRENT pest priorities
- evaluate available agrichemicals in terms of IPM-compatibility, safety, pest resistance, politics (international restrictions/MRLs etc)
- identify gaps in pest control strategies
- recommend alternatives for the olive industry

Conducted 2024-25, Released March 2025

Funded by Hort Innovation using the olive research and development levy and funds from the Australian Government.



Olive

Strategic Agrichemical Review Process
(SARP)

March 2025

Hort Innovation
Project – MT23001

SARP SUMMARY OF KEY OLIVE PESTS

PESTS	STATUS	NAME
INSECTS	HIGH PRIORITY	Olive lace bug <i>Froggattia olivinia</i>
	MODERATE PRIORITY	Black scale <i>Saissetia oleae</i>
		Apple weevil, Curculio beetle <i>Otiorhynchus cribricollis</i>
DISEASES	HIGH PRIORITY	Anthracnose <i>Colletotrichum</i> spp.
		Olive peacock spot <i>Spilocaea oleagina</i>
	MODERATE PRIORITY	Cercospora leaf mould, Grey mould <i>Pseudocercospora cladosporioides</i>
WEEDS	HIGH PRIORITY	Flaxleaf fleabane <i>Conyza bonariensis</i>
	MODERATE PRIORITY	Barnyard Grass <i>Echinochloa</i> spp.
		Crowsfoot Grass <i>Eleusine indica</i>

CHEMICALS REGISTERED OR PERMITTED FOR USE AGAINST OLIVE LACE BUG (Oct 25)

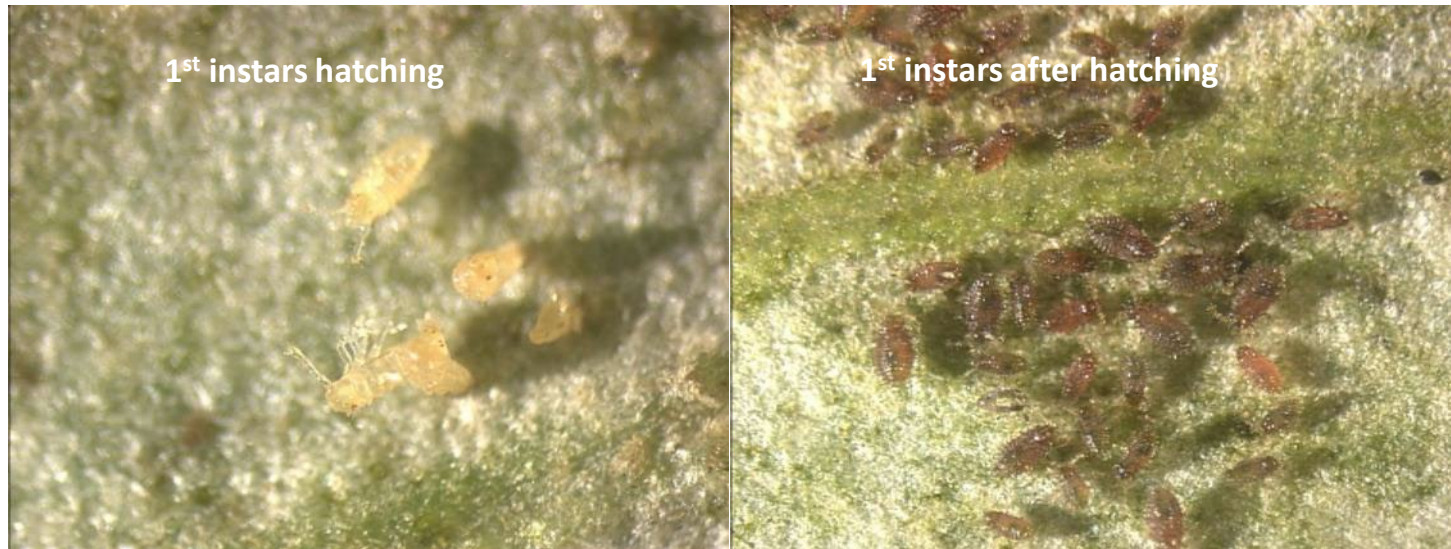
	ACTIVE CONSTITUENT	MoA GROUP	PRODUCT(S)	REGISTERED OR PERMIT	CONDITIONS OF USE	RISK: R1 critical R2 medium, R3 monitor
CURRENT OPTIONS	Acetamiprid + Pyriproxyfen	4A+7C (I)	TRIVOR®	PER89943 Until Sept 2027	Max 2 applications/ season, minimum 14 days apart.	R2
	Clothianidin	4A (I)	SAMURAI®	PER14897 Until Jan 2026	1 application/season. WHP 56 days.	R2
	Dimethoate	1B (I)	ROGOR®, others	PER13999 Until Jul 2026	Max 4 applications/season. 2 sprays, 7–14 days apart. Not for table olives. WHP 6 weeks.	R2
	Esfenvalerate	3A (I)	SUMI-ALPHA FLEX®, others	Registered	Max 4 applications/season to fruiting trees, ≥ 14 days apart. WHP 14 days.	
	Flupyradifurone	4D	SIVANTO PRIME®	Registered	Max 2 applications/season. Minimum 60 days apart. WHP 14 days.	
	Potassium soap		NATRASOAP®	PER14414 Until Jul 2028	Second spray 7-10 days later. WHP Nil.	
	Pyrethrins	3A (I)	PYGANIC®, others	PER81870 Until Jul 2029	Max 6 applications/season, min 14 days apart. WHP 1 day.	
POSSIBLE FUTURE OPTIONS	Isocycloseram	30	SIMODIS®		Not registered for Hemiptera	
	Sulfoxaflor	4C	TRANSFORM®		Registered for bugs in fruits and vegetables	

OLIVE LACE BUG *Froggattia olivinia* (Tingidae)

Native species

Occurs in all states. Major pest in NSW, North Vic, WA-
Eggs laid in leaf tissue, undersides of leaves

5 nymphal instars



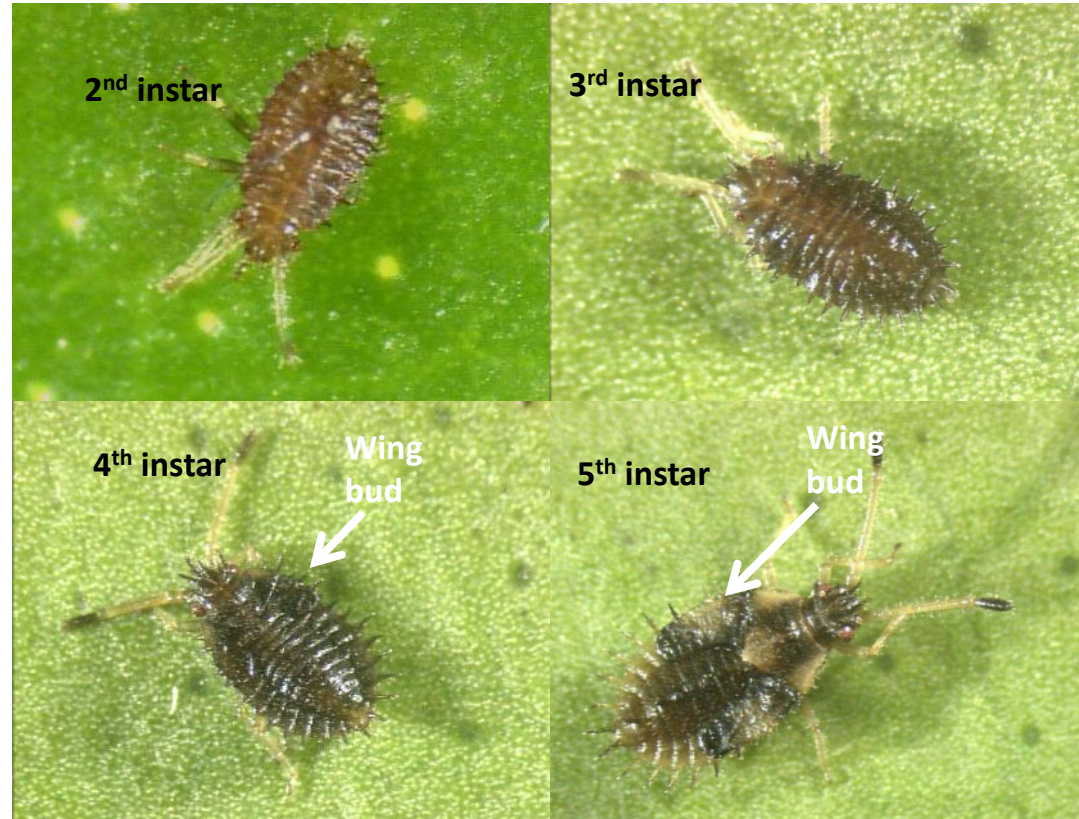
TIMING OF TREATMENT APPLICATIONS

Target nymphs (prior to reaching adulthood), esp. 1st generation

NOTE: emergence is not synchronous

Importance of monitoring (especially previous locations of (particularly high) infestations and those locations/cultivars that previously shown early emergence)

MONITORING IS THE KEY



OLIVE LACE BUG DAMAGE

All motile stages have piercing and sucking mouthparts

They mostly feed on undersides of leaves, but adults are also found on upper leaf surface



Typical early-stage olive lace bug damage (lasts for years)



Trees severely damaged by olive lace bug several years previously



Adult lace bugs ready to overwinter

CHEMICALS REGISTERED OR PERMITTED FOR USE AGAINST BLACK SCALE (Oct 25)

TARGET PEST OR DISEASE	ACTIVE CONSTITUENT	MoA GROUP	PRODUCT(S)	REGISTERED OR PERMIT	CONDITIONS OF USE	RISK
CURRENT OPTIONS	Acetamiprid and Pyriproxyfen	4A (I) 7C (I)	TRIVOR®	PER 89943 Until Sept 2027	WHP 28 days.	R2
	Emulsifiable Botanical Oil	9B (I)	ECO-OIL® MITICIDE/INSECTICIDE BOTANICAL OIL, POOP®	Registered	No WHP.	
	Fenoxycarb	7B (I)	INSEGAR®	Registered	Max 2 applications/season, min. 7 days apart. WHP 56 days.	
	Flupyradifurone	4D (I)	SIVANTO PRIME®	Registered	Max 2 applications/year, min 60 days apart. WHP 14 days.	
	Paraffinic oil, Petroleum spray oil	9B (I)	isoCLEAR HPO, TRUMP®, SACOA BIOPEST®	Registered	WHP 1 day.	
	Pyriproxyfen	7C (I)	ADMIRAL®, others	Registered	Max 2 applications/season. WHP 7 days.	
	Pyriproxyfen and Piperonyl Butoxide	7C (I)	PATRIARCH RMR®	Registered	Max 2 applications/season. WHP 7 days.	
FUTURE POSSIBLE OPTIONS	Buprofezin	16	APPLAUD®		Scales in fruit crops	
	Spirotetramat	23	MOVENTO®		Scales in fruit crops	
	Sulfoxaflor	4C	TRANSFORM®		Scales in fruit crops	

BLACK SCALE *Saissetia oleae* (Coccidae)

- Important and widespread insect pest
- 1-2? generations/year.
Overlapping, particularly in warmer climates



Adult female black scales on
leaves near the mid-vein



Ants and black scale

LIFE CYCLE OF BLACK SCALE IS CRITICAL TO MANAGEMENT

Eggs ($\leq$ thousands per female)

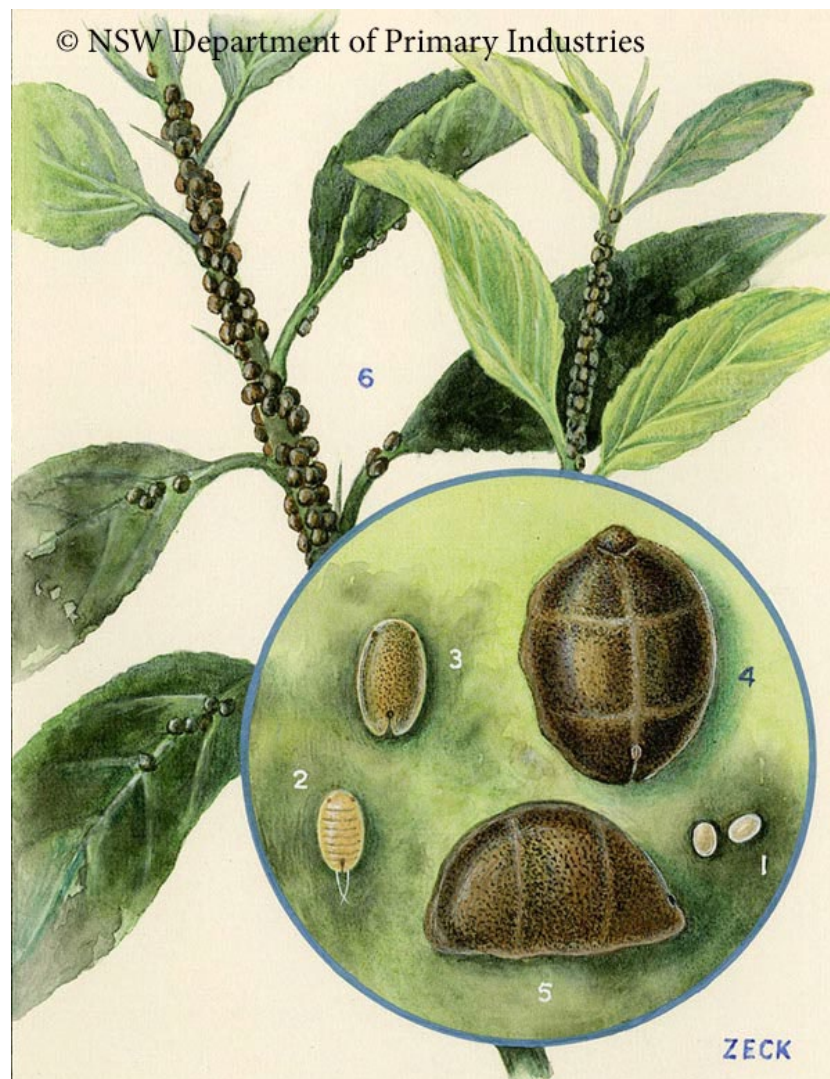
1st instar crawlers

2nd instar settled scales

3rd instar immature females
(H on back, flatter, paler)

Mature females (domed, dark brown/black)

Males rare, winged





Mature black scale female with eggs



Black scale adults and crawlers,
Parasitoid Scutellista caerulea (R)

TIMING OF APPLICATIONS

Target emerging crawlers and early established nymphs. NOTE: emergence is not synchronous

Importance of monitoring (especially previous locations where scale numbers high)

MONITORING IS THE KEY



Young adult female
black scales

CHEMICALS REGISTERED OR PERMITTED FOR USE AGAINST APPLE WEEVIL (Oct 25)

	ACTIVE CONSTITUENT	MoA GROUP	PRODUCT(S)	REGISTERED OR PERMIT	CONDITIONS OF USE	RISK
CURRENT OPTIONS	Alpha- cypermethrin	3A (I)	DOMINEX DUO INSECTICIDE®, SUMI-ALPHA FLEX®, others	PER14791 Until Nov 2026	Max 2 applications/season to trees of fruit bearing age. No WHP, but no grazing (Ground, butt treatments only).	
POSSIBLE FUTURE OPTIONS	Indoxacarb	22A	AVATAR®		Weevils in fruit and vegetable crops	R3
	Tetraniliprole	28	VAYEGO® ***		Weevils in fruit and nut crops	

*** Application submitted to APVMA for a label extension

APPLE WEEVIL *Otiorhynchus cribricollis*



Adults nocturnal, flightless.

Climb trees to chew leaves, with scalloped margins. Also feed on soft bark, growing tips and fruit stalks. Young trees may be killed and mature trees have reduced yield.



Images: Stewart Learmonth

Soil-dwelling larvae legless grubs with white bodies and brown heads.
Feed on plant roots, **but there are no reports of adverse effects on olive trees.**

One generation per year. Adults emerge from ground in early summer. Activity falls in hot weather, adults resume feeding late summer.

TIMING OF APPLICATIONS

Target emerging females in early summer

MONITORING OF FEMALE EMERGENCE FROM THE GROUND IS THE KEY

CHEMICALS REGISTERED OR PERMITTED FOR USE AGAINST ANTHRACNOSE (Oct 25)

	ACTIVE CONSTITUENT	MoA GROUP	PRODUCT(S)	REGISTERED OR PERMIT	CONDITIONS OF USE	RISK
CURRENT OPTIONS	Azoxystrobin	11 (F)	Various	Registered	Max 2 applications/season >21 days apart. WHP 21 days.	
	Copper (copper oxychloride, cupric hydroxide, cuprous oxide, tribasic copper sulphate)	M1 (F)	Various	Registered	WHP 1 day Also for other fruit rots Generally organically acceptable	
	Fluopuram & Tebuconazole	7+3 (F)	LUNAR EXPERIENCE®	Registered	Max 2-3 applications/season, retreatment 14-21 days. WHP 14 days	R3
	Mancozeb	M3 (F)	Various	PER88358 Until May 2028	Max 4 applications/season >14 days apart. WHP 14 days.	R2
	Metiram & Pyraclostrobin	M3+11 (F)	AERO®	PER14908 Until May 2029	Max 2 applications/season >21 days apart. WHP 21 days.	R2
FUTURE POSSIBLE OPTIONS	<i>Bacillus amyloliquefaciens</i> strain QST713	Biological	SERENADE PRIME®		Registered for anthracnose in tropical and sub-tropical fruit with inedible peel	
	<i>Aureobasidium pullulans</i> Strains DSM14940 & 14941	Biological	BOTECTOR®		Registered for anthracnose in berries	

ANTHRACNOSE (*Colletotrichum acutatum*, *C. gloeosporoides*)

Latent infection

Primary infections from overwintering sclerotia (mummies) on flowers, young fruit, leaves.

Secondary infections (from lesions to other ripening fruit)

Weather conducive to anthracnose (warm, humid, leaf wetness) promotes primary, secondary spread

TIMED APPLICATIONS
ESP. EARLY IS THE KEY



Sergeeva, Nair & Spooner-Hart 2008

Flower infection



Sergeeva, Spooner-Hart & Nair 2008

Mummified fruit:
source of infection



Secondary infection

CHEMICALS REGISTERED OR PERMITTED FOR USE AGAINST PEACOCK SPOT AND CERCOSPORA LEAF MOULD (Oct 25)

	ACTIVE CONSTITUENT	MoA GROUP	PRODUCT(S)	REGISTERED OR PERMIT	CONDITIONS OF USE	RISK
CURRENT OPTIONS	Copper (copper oxychloride, cupric hydroxide, cuprous oxide, tribasic copper sulphate)	M1 (F)	Various	Registered	WHP 1 day Also for other fruit rots Generally organically acceptable	
	Copper oxychloride + copper hydroxide	M1 (F)	AIRONE® WG Fungicide	Registered	WHP 1 day Also for other fruit rots	
	Mancozeb	M3 (F)	Various	PER88358 Until May 2028	Max 4 applications/season >14 days apart. WHP 14 days.	R2
FUTURE POSSIBLE OPTIONS	<i>Bacillus amyloliquefaciens</i> strain QST713	Biological	SERENADE OPTI®		Registered for leaf diseases in some fruit and vegetable crops. Activity on Peacock Spot unknown.	

PEACOCK SPOT *Fusicladium oleaginum*

Common in regions that experience wet and humid spring conditions.

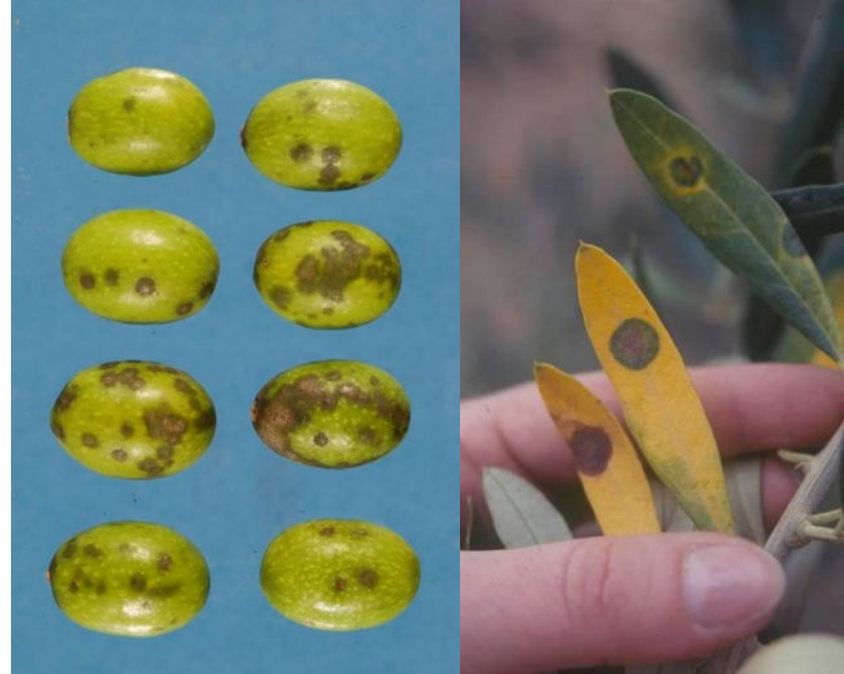
– leaf symptoms

- Spots can develop a dark outline, concentric markings or a yellow halo
- Infected leaves yellow before dropping

– fruit symptoms

- in moist weather conditions developing fruit can also be infected – although this isn't common

TIMING OF APPLICATIONS (especially late winter & spring) IS THE KEY



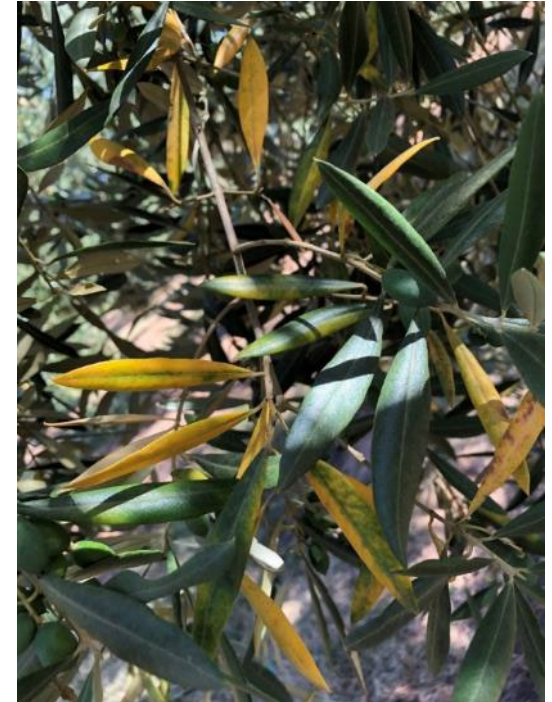
Cercospora LEAF MOULD *Pseudocercospora cladosporioides*

Common in Australian olive groves

Slow degenerative disease often taking several years for trees to significantly decline

Lead-grey mould develops on the leaf under-surface – mostly visible on young leaves

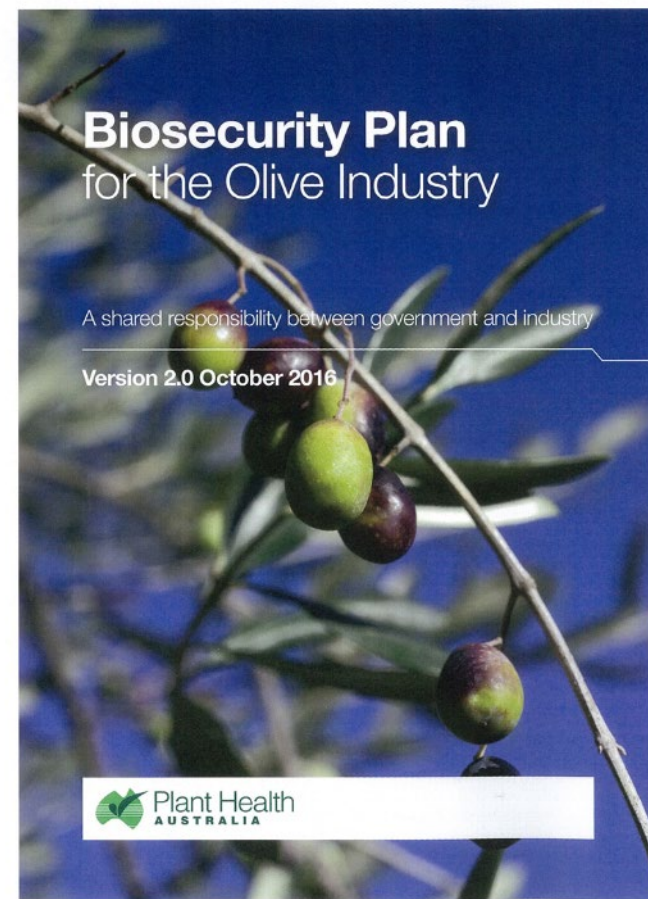
Yellow infected leaves easily dislodged when touched



PROTECTING OUR GROVES: THE OLIVE INDUSTRY BIOSECURITY PROJECT

- Previous Biosecurity Plans (most recent-v.2.0, 2016).
- Recently-commenced project will develop Biosecurity Plan v3.0 enabling the Australian olive industry to:
- Identify the exotic pests which pose highest threat to olive growers.
- Develop mitigation activities to reduce biosecurity threat, including farm-level activities and surveillance and diagnostic activities.
- Improve current biosecurity capacity and capability at industry and grove level.

Funded by Hort Innovation using the olive research and development levy and funds from the Australian Government.



- Commissioned organisation for this project is Plant Health Australia (PHA)
Involves collaboration with industry and national and state government agencies
- The Australian Olive Association is a member of PHA and represents biosecurity interests of olive industry
- Olive Technical Review Panel (AOA, other industry/government representatives), met 24 September 2025 to review the Draft Threat Summary Table.

HIGH PRIORITY PEST LIST											
Main TST/Footnote	Family	Scientific name	Common name	Host range	Geographic Distribution	Comments	Entry potential	Establishment potential	Spread potential	Economic impact	Overall risk rating
Hemiptera											
TST	Aphrophoridae	<i>Philaenus spumarius</i> (with <i>Xylella fastidiosa</i>)	Meadow froghopper, meadow spittle bug	<i>Philaenus spumarius</i> is highly polyphagous on over 1000 host plants (Cornara, Bosco & Ferreres, 2024). Preferred hosts include <i>Medicago sativa</i> , <i>Trifolium</i> sp., <i>Vicia</i> spp. and <i>Xanthium strumarium</i> due	<i>Philaenus spumarius</i> : Italy, United States of America, Hawaii, New Zealand, Europe, An outbreak of <i>Xylella fastidiosa</i> that impacted olive trees in Southern Italy in 2013	Both the nymph and adult developmental stages of <i>Philaenus spumarius</i> are xylem feeders however, it is	MEDIUM <i>Philaenus spumarius</i> is geographically close to Australia being found in New Zealand and confirmed by numerous preserved	HIGH Individuals of <i>Philaenus spumarius</i> are reported to colonise most terrestrial habitats and are highly polyphagous on over 1000 host	HIGH Individuals can disperse short distances between host plants through crawling (Cornara, Bosco & Ferreres, 2024). Adults are capable of	HIGH <i>Xylella fastidiosa</i> subsp. <i>pauca</i> is the causal agent of Olive quick decline syndrome (OQDS) which involves symptoms on olive hosts	HIGH
Footnotes											
Bacteria											
TST	Xanthomonadaceae	<i>Xylella fastidiosa</i> subsp. <i>multiplex</i> (with vectors)	Leaf scorch, Bacterial leaf scorch	<i>Xylella fastidiosa</i> subsp. <i>multiplex</i> : Wide host range. Current host list available for this subspecies on the <i>Xylella fastidiosa</i> subsp. <i>multiplex</i> hosts include <i>Acacia cultriformis</i> , <i>Acacia dealbata</i> , <i>Acacia longifolia</i> , <i>Acacia saligna</i> , <i>Acacia sp.</i> , <i>Amaranthus retroflexus</i> ,	<i>Xylella fastidiosa</i> subsp. <i>multiplex</i> : Argentina, Brazil, France, Italy,	As a bacterium, <i>Xylella fastidiosa</i> is xylem-limited and inhabits the sap of the host plant where its <i>X. fastidiosa</i> in general is vectored and transmitted by known xylem feeding hemipteran insects in the	MEDIUM Entry is possible on infected plants and plant material. A wide host range combined with a wide geographic distribution increases	HIGH <i>Xylella fastidiosa</i> prefers mild temperatures, frequent rainfall and high humidity throughout winter (Loureiro et al, 2023).	HIGH Spread is possible with the movement of infested plants and plant material and spread by imported and potentially, local	HIGH <i>Xylella fastidiosa</i> subsp. <i>multiplex</i> has been isolated from olive trees exhibiting symptoms of leaf scorch and branch dieback	HIGH
Footnotes											
TST	Xanthomonadaceae	<i>Xylella fastidiosa</i> subsp. <i>pauca</i> (with vectors)	Olive quick decline, Citrus variegated chlorosis agent, Bacterial leaf scorch	<i>Xylella fastidiosa</i> subsp. <i>pauca</i> : Wide host range. Current host list available for this subspecies on the <i>Xylella fastidiosa</i> subsp. <i>pauca</i> hosts include <i>Acacia saligna</i> , <i>Acacia sp.</i> , <i>Amaranthus retroflexus</i> ,	<i>Xylella fastidiosa</i> subsp. <i>pauca</i> : Argentina, Brazil, Colombia, Costa Rica,	As a bacterium, <i>Xylella fastidiosa</i> is xylem-limited and inhabits the sap of the host plant where its <i>X. fastidiosa</i> in general is vectored and transmitted by known xylem feeding hemipteran insects in the	MEDIUM Entry is possible on infected plants and plant material. <i>Xylella fastidiosa</i> subsp. <i>pauca</i> was suspected to have been introduced to Italy through the	HIGH <i>Xylella fastidiosa</i> prefers mild temperatures, frequent rainfall and high humidity throughout winter (Loureiro et al, 2023).	HIGH Spread is possible with the movement of infested plants and plant material and spread by imported and potentially, local	HIGH <i>Xylella fastidiosa</i> subsp. <i>pauca</i> is the causal agent of Olive quick decline syndrome (OQDS) which involves symptoms on olive hosts	HIGH
Footnotes											
Fungi											
TST	Glomerellaceae	<i>Colletotrichum nymphaeae</i> (syn. <i>Colletotrichum mahoniae</i> , Considered part of the <i>Colletotrichum acutatum</i> species complex of which		<i>Olea europaea</i> (olive) (Antelmi, Sion & Nigro, 2019; Biosecurity New Zealand, 2022), <i>Persea</i> Reported on olive in Italy and isolated from rotten olive fruit (Antelmi, Sion & Nigro, 2019). Reported on	China, Japan, Malaysia, South Korea, Portugal, United States of America Absent from New Zealand (Biosecurity New Zealand, 2022).	Isolated from rotten olive fruit in Italy (Antelmi, Sion & Nigro, 2019). <i>Colletotrichum</i> spp. are	HIGH The New Zealand Ministry for Primary Industries included this species in an import risk assessment of <i>Persea americana</i> (avocado)	HIGH <i>Colletotrichum</i> spp. are reported to persist on the leaves and twigs of trees (Biosecurity New Zealand, 2022). As noted by Biosecurity	HIGH Local dispersal is possible via conidia of <i>Colletotrichum</i> spp. which are transmitted through water splash (Biosecurity New	HIGH <i>Colletotrichum</i> spp. damage manifests primarily as fruit anthracnose which may include formation of necrotic black spots	HIGH
Footnotes											
TST	Pectosphaeriellaceae	<i>Verticillium dahliae</i> (exotic defoliating strains)	Verticillium wilt (defoliating strains)	Wide host range including <i>Olea europaea</i> (olive) (Hosseinalizadeh, Erincik & Acikgoz, 2020; Kaliterna et al, 2016), Turkey (Hosseinalizadeh, Erincik & Acikgoz,	Croatia (Kaliterna et al, 2016), Turkey (Hosseinalizadeh, Erincik & Acikgoz,	Is a soilborne pathogen reported to cause wood decay and vascular wilt in olive (Canizares et al., V. dahliae is said to contain mycoviruses that may be spread through cell division, sporogenesis and	HIGH Multiple potential entry pathways due to wide host range; primarily plants for planting (EPPO, 2022). Soil: including soil on agricultural	HIGH The polyphagous nature of this species with its wide host range would suggest it is more likely, relative to host specific	HIGH The primary means of transmission include plants for planting and soil including soil on agricultural machinery and in irrigation water	HIGH Soilborne pathogen reported to cause wood decay and vascular wilt in olive (Canizares et al, 2015; Carlucci et al, 2013).	HIGH
Footnotes											
TOTAL	5										

Part of the mix - we already have a lot. Not likely to spread quickly. Impacts similar to other *Colletotrichum* spp.

HIGH PRIORITY EXOTIC PESTS (Reviewed and agreed)

SCIENTIFIC NAME	COMMON NAME(S)	CLASSIFICATION
<i>Bactrocera oleae</i>	Olive fruit fly/Olive fly	Insect-Diptera
<i>Philaenus spumarius</i>	Meadow froghopper/ Meadow spittle bug	Insect-Hemiptera
<i>Xylella fastidiosa</i> subsp. <i>multiplex</i> (with vectors)	Leaf scorch/Bacterial leaf scorch	Bacteria
<i>Xylella fastidiosa</i> subsp. <i>pauca</i> (with vectors)	Olive quick decline/Citrus variegated chlorosis agent/ Bacterial leaf scorch	Bacteria
<i>Verticillium dahlia</i> (exotic strains)	Verticillium wilt	Fungi

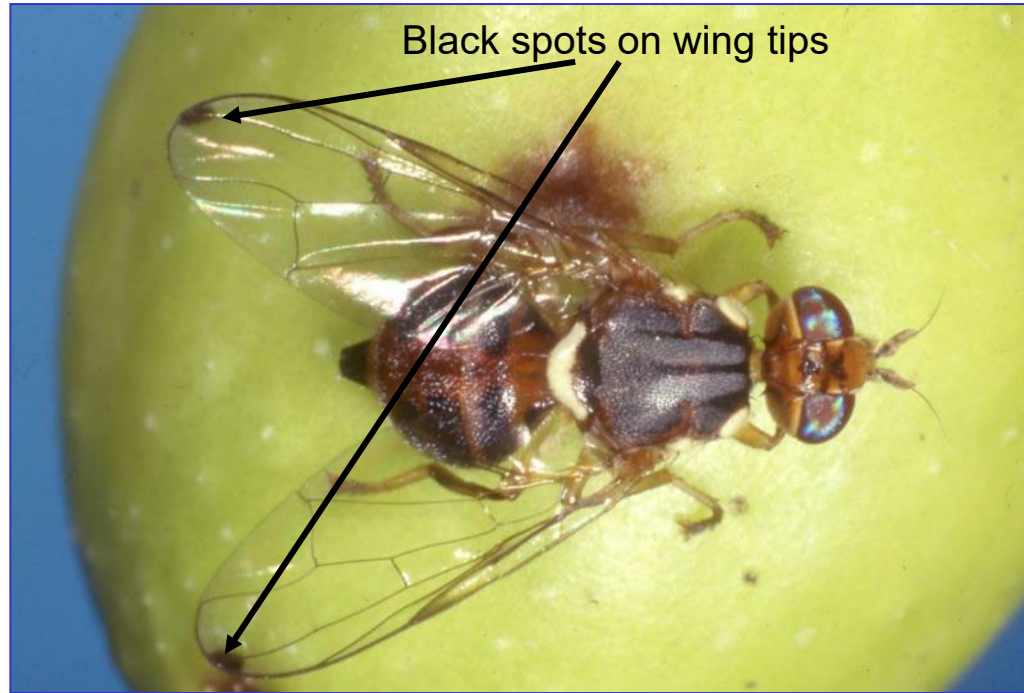
EXOTIC PESTS TO MONITOR (Reviewed and agreed)

Reduced likelihood of entering Australia due to limited incursion pathways but if introduced, would have a significant economic impact on the Australian olive industry.

SCIENTIFIC NAME	COMMON NAME(S)	CLASSIFICATION
<i>Homalodisca vitripennis</i> (with <i>Xylella fastidiosa</i>)	Glassy winged sharpshooter	Insect-Hemiptera
<i>Phloeotribus scarabaeoides</i> (syn. <i>Phloeotribus oleae</i>)	Olive bark beetle	Insect-Coleoptera
<i>Prays oleae</i>	Olive moth/Olive moth kernel borer	Insect-Lepidoptera
<i>Rhynchites cribripennis</i> (syn. <i>Caenorhinus cribripennis</i> , <i>Coenorrhinus cribripennis</i>)	Olive weevil	Insect-Coleoptera
<i>Xylella fastidiosa</i> subsp. <i>multiplex</i> (without vectors)	Leaf scorch/Bacterial leaf scorch	Bacteria
<i>Xylella fastidiosa</i> subsp. <i>pauca</i> (without vectors)	Olive quick decline/Citrus variegated chlorosis agent/ Bacterial leaf scorch	Bacteria

OLIVE FLY *Bactrocera oleae*

- widely distributed in the Mediterranean basin, northern and southern Africa, Western Asia, India, Pakistan. Also present in California, Mexico.
- the most important and destructive pest of olives, and difficult to control
- will attack green fruit (unlike Queensland fruit fly or Medfly)
Numerous generations (up to 3 or even more) are possible
- pupation normally occurs in the fruit (unlike Queensland fruit fly or Medfly that always pupate in soil), only pupating in soil in the final generation when fruit are on the ground (for overwintering)



Adult female olive fly ovipositing on green olive

Note: black spots on wing tips (distinguishes it from Queensland fruit fly)

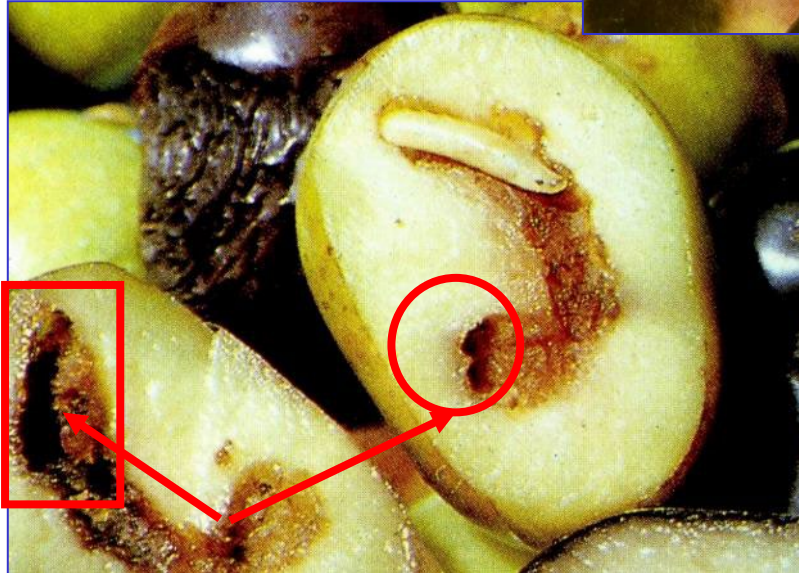
Images of olive fly gratefully received from Dr A Loni, University of Pisa

Olive fly larval tunnelling
can be extensive



2nd instar olive fly
larva (maggot)
tunnelling into fruit

Exit wounds in fruit
when adult olive flies
emerge



3rd instar olive fly larva
with pupation chamber
(marked)

Note: immature stages can be
identified by molecular (DNA)
methods

OLIVE MOTH, OLIVE KERNEL BORER

Prays oleae

- caterpillars damage flowers, fruit and leaves
- present in the Mediterranean, Northern Africa, some other European countries but not central Asia or North or South America
- Host range is limited to olives and olive family
- Adult moths small (6 mm long, 13 mm wingspan), silvery grey, with long antennae



Larvae can grow to 8 mm with colour light brown to green. The pupa is protected by loose silk webbing.

The 1st of 3 generations of caterpillars (anthophagous) feed on flowers. Frass (faecal pellets and webbing) may be present.



Caterpillars of the 2nd generation (carpophagous) are the most harmful, burrowing into developing fruit and feeding near the kernel, causing severe fruit damage and fruit drop.



Caterpillars of the 3rd generation (phyllophagous) feed on leaves, including causing leaf mining and shoot bud damage.



OLIVE TREE BARK BEETLE *Phloeotribus scarabaeoides*
(syn. *Phloeotribus oleae*)

Mediterranean region

Damages and kills younger branches via feeding activity which produces galleries, reducing number of flowers and fruit



OLIVE WEEVIL *Rhynchites cribripennis*

Mediterranean region

Adults drill holes and bore into fruit, causing fruit drop.

Females lay eggs in olive fruit and larvae consume the fruit kernel.

Can also feed on young shoots and leaves.



Xylella fastidiosa

3 subspecies:

X.f. pauca (Olive tree decline)

X.f. multiplex (Leaf scorch- possible olive damage)

X.f. fastidiosa (Olive not host)

Very wide host range (although *X.f. pauca* more restricted 59 host species)

Transmitted by xylem-feeding insects in families Aphrophoridae, Cercopidae and Cicadellidae (plant hoppers, sharpshooters, spittlebugs)

When vector feeds on infected plant *X. fastidiosa* colonizes the vector by forming a biofilm on its mouth-parts

X. fastidiosa also forms biofilms in plant xylem vessels, obstructing vascular flow

X. fastidiosa may be asymptomatic in infected plants

Olive Tree Decline

- In Europe *Xylella fastidiosa* subsp. *pauca* first recorded in 2013 Apulia Italy, causing Olive Tree Decline
- In 10 years, it had destroyed millions of olive trees over 8,000 square km in Southern Italy
- Over past decade, it has also advanced 250 km north, to Bari



Image: Amanda Bailey



MAJOR VECTOR OF *X. fastidiosa* in USA:

Glassy sharpshooter *Homalodisca vitripennis* (Cicadellidae) xylem feeder. This species is a high quarantine risk pest for Australia (many crops)

Australia, like Italy and most other countries, has many native species of xylem-feeding cicadellids and spittle bugs.

Meadow spittlebug is also a known vector for *Xylella*



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New NDP endorsed for meadow spittlebug (*Philaenus spumarius*)

28 July 2025

A new National Diagnostic Protocol (#NDP54) for meadow spittlebug was endorsed in May 2025 by the Subcommittee on Plant Health Diagnostics (SPHD). This exotic insect poses a significant biosecurity threat as a vector of the bacterium, *Xylella fastidiosa*, which is listed in the top 10 on the National Priority Plant Pest (NPPP) list.



Photo Pia Scanlon WA DPIRD

<https://www.planthealthaustralia.com.au/new-national-diagnostic-protocol-endorsed-for-meadow-spittlebug-philaenus-spumarius/>

This species is present in New Zealand

National Preparedness Workshop- Mike Thompsett, me (but unfortunately, not Michael Southan) 18 September 2025 Mildura, assessing the processes that should take place following confirmation of *Xylella fastidiosa* in the event of an incursion, with national/state government and other horticultural industry representatives, including Hort Innovation.



VERTICILLIUM WILT (*Verticillium dahliae* (defoliating strain))

- soil-borne fungal pathogen that infects roots and travels up the xylem into the trunk and lower branches causing them to wilt
- widespread around the world and has wide host range affecting crops such as cotton, potatoes, eggplants stone fruit trees – and olives in Australia
- **Several strains** of this fungus has been distinguished as the 'defoliating strain' (DS) on cotton in USA. It causes wilt and death of olive trees in California and parts of Europe.
- **Some defoliating strains have not been recorded in Australia** and are therefore a biosecurity threat.



Defoliating strain of *V. dahliae* causing olive tree wilt in California showing individual branches with symptoms

L Burgess



Defoliating strain of *V. dahliae* causing olive tree wilt and death

California

L. Burgess

BIOSECURITY ON YOUR OLIVE GROVE

- It is strongly recommended that you develop and actively follow a biosecurity management plan for your property(ies)
- You can access the document FARM BIOSECURITY ACTION PLAN FOR OLIVE GROWERS, which includes a Grove Biosecurity Checklist from AOA's website https://australianolives.com.au/wp-content/uploads/2018/06/Biosecurity-Olive_Reduced-File.pdf



FINAL WORDS

There will be engagement with the Industry on development of the Biosecurity Surveillance, Readiness and Action Plan

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If you suspect a new pest, call the Exotic Plant Pest Hotline on 1800 084 881



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And there is access to IPDM resources

<https://australianolives.com.au/resources/integrated-pest-disease-management/ipdm-project-outputs>