Pests and diseases of olives in New Zealand

Identification, management and control

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Overview

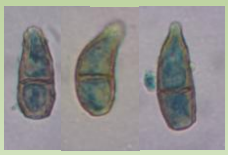
- Leaf spot diseases
- Fruit diseases
- Die-back, knots and cankers
- Pests – scales, borers and rollers
- Use of agrochemicals in the grove
- Bird management

Leaf spot diseases

- **Peacock spot** (caused by *Spiloceae oleaginea*)
- **Sooty blotch** (caused by *Pseudocercospora cladosporium*)
- **Leaf scab** (caused by *Phyllosticta* sp.)

Leaf spot diseases

Peacock spot (caused by *Spiloceae (= Fusicladium) oleaginea*)

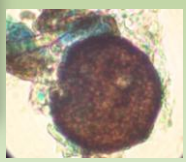


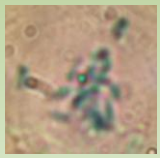
Leaf spot diseases

Sooty blotch (caused by *Pseudocercospora cladosporium*)
(Purple blotch; Cercosporidiosis)

Leaf spot diseases

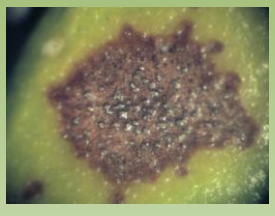
Leaf scab (caused by *Phyllosticta* sp.)

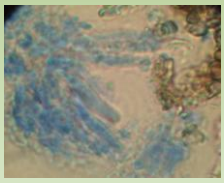




Leaf spot diseases

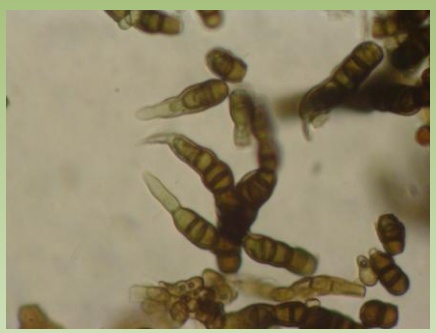
Unidentified spot ex Ohoka (caused by an ascomycete)





Leaf spot diseases

Sooty mould (*Capnodium* spp.)



Leaf spot diseases

Management:

- If any of the diseases are present – collect up fallen leaves if practical
- Keep canopies open to reduce humidity and enhance air movement
- Spray on time with recommended fungicides (after harvest and early spring)
  - Copper sprays
  - Boudreaux mixture
  - Spotless (salicylic acid, benzalkonium chloride; propiconazole)
  - Off-label fungicides (strobilurins and triazoles)

Fruit diseases

Peacock spot

Bacterial blast

Anthracnose

Physical damage

Stem canker diseases

- die back symptoms

Stem canker diseases

Stem canker diseases

Causes:

- ***Phomopsis* sp.**
- ***Botryosphaeria* spp.**
- **Bacteria (*Xanthomonas* and *Pseudomonas* spp.)**
- ***Gibberella baccata* (*Fusarium lateritium*)**

- **Verticillium wilt (*V. albo-atrum ; V. dahliae*)**

Management:

- **Prune out and burn (or mulch / bury)**

Olive knot disease

Cause: Bacterium – *Pseudomonas savastanoi* pv. *savastanoi*

Management:

- **Prune out and destroy. Sterilise implements**

Olive pests - scales

Black or H scale

Olive scale

Hemispherical scale

Management:

- Monitor and estimate threshold
- Timely spray – appropriate chemical – but all off label

Photos – Graham Burnip

Olive pests

Leaf roller caterpillars

Management:

- Monitor and estimate threshold
- Timely spray – appropriate chemical – but all off-label

Photos – Graham Burnip

Olive pests

Pururi moth – ***Aenetus virescens***

The use of Agrochemicals in the grove

- **Very few pesticides registered for use in olive groves**
- **Off-label use is often the only alternative**
- **No come-back to the provider / chemical company**
- **READ the labels carefully**
- **Note withholding periods and BE CONSERVATIVE**
- **Get sound and reliable advice on what, how, when and where to use pesticides**
- **Know MRLs for chemicals being used**
- **Use the NOVACHEM Manual – get the latest edition**
- **Record all applications in detail – chemicals, dates and times, rates, conditions**

Birds

- What types of birds frequent the groves?
- When are they most abundant (time of year)?
- Where are they residing when not in the grove?
- Are they easily scared or disturbed?
- Are there protected species in the population?

Fruit eating birds

Silver eyes(wax-eyes)
Starlings
Blackbirds
Sparrows
Mynas
Thrushes
Green Finches
NZ Pigeons
Bell Birds
Tui
Rooks

Bird control considerations

- **Litigation**
- **Costs and cost benefits**
- **Action thresholds**
- **Monitoring and analysis of action**

Bird control methods

- **Killing:**
  - **Shooting**
  - **Trapping**
  - **Poisoning**
- **Netting (exclusion)**
- **Repellents**
- **Deterrents**

Bird deterrents

Scarers:

- **Noise – guns, gas bangers, audible alarms (bird noises)**
- **Association – Scarecrows, hawk kites, big eyes**
- **Novelties – Janglers**
- **Feeding deterents**

Bird deterrents

"The Jangler"

Thanks to AB Annand – Lincoln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Bird deterrents
"Learned avoidance behavior"

- **Feed birds nice ripe olives on feeder (stored from last season) before olives begin to ripen**
- **Then substitute with feed with an unpleasant taste, smell, after-effect**
- **Induce post digestion feed-back (PDF)**
- **Pyrethrum (unpleasant); 9-10 anthraquinone (laxative)**
- **Birds "learn" and avoid feeding in the area**

- Thanks to Chris Pennell – AgResearch, Lincoln

Thank you

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