Overview

• Leaf spot diseases
• Fruit diseases
• Die-back, knots and cankers
• Pests – scales, borers and rollers
• Use of agrochemicals in the grove
• Bird management
• **Peacock spot** (caused by *Spiloceae oleaginea*)

• **Sooty blotch** (caused by *Pseudocercospora cladosporium*)

• **Leaf scab** (caused by *Phyllosticta* sp.)
Sooty blotch (caused by *Pseudocercospora cladosporium*)
(Purple blotch; Cercosporidiosis)

Leaf scab (caused by *Phyllosticta* sp.)
**Unidentified spot** ex Ohoka (caused by an ascomycete)

**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

**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
Pests & Diseases – Ian Harvey

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
• 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 deterrents
Bird deterrents

“The Jangler”

Thanks to AB Annand – Lincoln
Pests & Diseases – Ian Harvey

**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