Increasing the Market Share for NZ EVOO

The Focus Grove Project

Project Applications

- Sustainable Farming Fund applications for 2014 and 2015
  - Unsuccessful because scope was too broad and outcomes would be too difficult to measure
  - Financial contribution from industry < 50% total cash cost
- Sustainable Farming Fund application for 2016
  - Developed after discussion with SFF Advisor
  - Scope limited to Canopy Management and Disease Management
  - Total cash cost = $71,320, half funded by Olives NZ members
  - ➢SUCCESS!
- Three year project formally started July 2016

Presentation Overview

- History – issues with New Zealand production
- Project Applications
- Approved Project Scope
- Focus Groves
  - Initial assessment October 2016
  - Visits – March 2017, October 2017, March 2018
- Harvest Data Comparisons
- Fact Sheets Produced
- Issues
- Other Metrics and Comments
- Recommendations

Funding

- Cash Funding
  - Sustainable Farming Fund $35,660
  - Olives NZ members & groups $35,660
- In Kind Contributions
  - Four Focus Groves $57,480
  - Olive Culture & Harvesting $6,500
  - Olives New Zealand $4,300 (but blown out!)

History – issues with New Zealand production

- Issues
  - Average annual production = <10kg per tree
  - Biennial bearing
  - Disease in trees
  - Low production = high costs
  - NZ market share for NZ EVOO = <10%
  - International research not applicable to New Zealand

➢New Zealand olive industry market share constrained because of low levels of productivity

Approved Project Scope

- Establish four Focus Groves in different regions using Frantoio trial blocks
- Two Project Consultants – Plant & Food Research, Independent Orchard Specialist
- Visit the four Focus Groves twice annually to evaluate tree health, provide advice and monitor effectiveness
- Project methodologies based on Plant and Food success with stone fruit – canopy management and disease management
- Regional Field Days to demonstrate and share knowledge
- Status Reports, Fact Sheets, Project Team Meetings and Reporting via the Olives NZ website, newsletter, other publications

➢Aim – to increase crop load to 15kg per tree per annum

Preliminary Recommendations

- Canopy Management
  - Reduce height
  - Open up canopy
  - Set up regeneration of new healthy (sprayed!) young growth
  - Remove dead and damaged branches
- Disease Management
  - Proactive spraying programme: keeping a protective fungicide cover
  - Mancozeb/Manzate every 20 days (if dry): re-apply immediately after cumulative 20mm rain
  - If cover is almost exhausted (15+ days) apply spray immediately before rain
  - Application rate is 3kg per Ha per 1000 litres of water
  - Manzate is recommended as it is the most cost effective product on the market (product cost = 10c per tree per application)
  - Orchard air blast sprayer required for effective tree coverage

Hawke's Bay – pruning advice

Ngatarawa, Hawke's Bay

Grove Visit – March 2017

- More aggressively pruned tress had larger fruit
- Overall good fruit set
- Impact of drought not so apparent (yet!)

Initial assessment October 2016

- Grove in good shape – early adopters of methodologies
- More conservative pruning recommended
- Drought issues

Hawke's Bay – trees looking pretty good

Grove Visit – October 2017

- Low evidence of disease, excellent new growth
- Recommended pruning strategy resulted in 50% more fruit than severely pruned trees, however harvest down (wet winter)
- Thinning (January prune) recommended as crop looking to exceed 30kg per tree

Hawke's Bay – trees and fruit looking excellent

Hawke's Bay – trees showing excellent health and new growth

Leafyridge, Wairarapa

Grove Visit – March 2018

- Secondary pruning carried out to avoid over cropping
- Trees very healthy and well balanced with good crop load top to bottom
- An exemplary grove

Initial Assessment – October 2016

- Disease apparent
- Canopy management just commencing
- Wind and drought issues

Wairarapa – pruning

Grove Visit – October 2017

- Pruning to open up canopy looks effective
- Low evidence of disease
- Drought resulted in poor extension growth
- Lack of sunshine from February constrained crop maturing and harvestability

Grove Visit – March 2017

- Good evidence of 2 year old leaves on new shoots
- Healthy canopy with vigorous new growth around cuts
- Some scale infestation
- Drought reduced some trees' ability to fruit but fruit now set in clusters

Wairarapa – before and after pruning

Note the abundant new growth from previous years' large limb removals

Wairarapa – discussing new growth

Grove Visit – March 2018

- Healthy two year old leaf through canopy, excellent new growth extension
- Virtually no sign of disease
- Excellent bunches of fruit
- Maintenance only pruning now required

Wairarapa – trees and crop looking great


Kakariki, Nelson

Wairarapa – plentiful new growth


Initial Assessment – October 2016

- Giant trees – major restructuring required
- Disease pressure apparent
- Frequent heavy rainfall

Wairarapa – great extension growth and coppiced tree doing good


Nelson – tree height a major issue


Grove Visit – March 2017

- Pruned trees have responded well with new growth
- Good two year leaf evident
- Crop load estimated 30kg per tree
- Height reduction still the priority whilst maintaining crop

Nelson – Tasting Workshop

Nelson - opening up the canopy

Grove Visit – March 2018

- Pilot trees now smaller in height than control trees but at least same crop
- Little evidence of disease
- Good crop load

Grove Visit – October 2017

- Pruning strategy to reduce height resulting in rejuvenation lower down
- Most intensive spray program required but reflected in good reduction in disease
- Clear improvement on leaf retention and health

Nelson – trees looking really improved

Terrace Edge, Canterbury

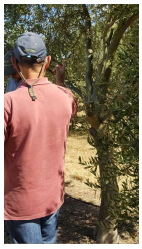
Grove Visit – March 2017

- Pruning too conservative
- Disease apparent, more frequent spraying required
- Scale and minimal Anthracnose observed

Initial Assessment – October 2016

- Disease pressure apparent
- Small dense trees impervious to light and spray penetration
- Wind and drought issues

Canterbury – pruning has been effective



Canterbury – before and after

Grove Visit – October 2017

- Pruning has been effective in opening up canopy for sunlight penetration
- Only secondary pruning recommended
- Increased disease apparent – spray programme not followed
- Not all of crop harvested

Canterbury – grove discussion

Olives on the Hill, Northland (added)

Grove Visit – March 2018

- Crop load patchy, medium crop
- Canopy improved although still lean
- Disease still evident – anthracnose, cercospora

Initial Assessment – October 2016

- Large unkempt trees – major restructuring required
- Disease pressure apparent
- Frequent heavy rainfall

Canterbury

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Northland

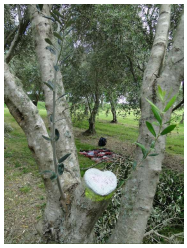
Grove Visit – March 2017

- Pruned trees showing good regrowth with two year old growth
- Disease pressure reduced to much lower incidence

Northland – more restructuring


Northland – regrowth looking good

Northland –cut and coppiced regrowth




Grove Visit – October 2017

- Pruning and spraying strategies resulted in healthier trees and heavy flowering
- Harvest and yield down (dull, wet autumn and winter)

Grove Visit – March 2018

- Good regrowth on lower regions of trees with good leaf health
- Good crop load
- Renovation pruning to continue for another year or two

Northland – fruit looking good, some thinning required

Harvest Data Comparisons – Frantoio kg per tree
Compared to regional data/control group (inc. FGs)

Participant	2014	2015	2016	2017	2018
Terrace Edge	1.9	1.9	16.1	2.7	1
Canterbury	6	1.9	10.3	1.3	6.2
Bel-Hamed					13.6
Olives on the Hill	8.5	-	21	7.51	28.6
Northland	7.3	3	10.4	6.8	12.5

General Comments

- Disease pressure was always accompanied by significant foliage loss and poor leaf retention
- The autumn and winter of 2017 was exceptionally wet and dull across New Zealand. This delayed fruit maturation and reduced harvest yields (trees difficult to shake, some disease pressure causing fruit loss)

Leafyridge – Frantoio 2018

Harvest Data Comparisons – Frantoio kg per tree
Compared to regional data/control group (inc. FGs)

Participant	2014	2015	2016	2017	2018
Ngatarawa	22.8	21.7	21.1	10.6	28
Hawke's Bay	3.6	10.2	10.3	10.6	22
Leafyridge	15.2	Frosted	19.1	5.7	25.4
Wairarapa	6.5	5	10.2	6.9	15.4
Kakariki	11	14	12	14.5	15
Nelson	12.1	8.9	11	10.9	8.5

Fact Sheets Produced

- March 2017 Disease Management
- October 2017 Canopy Management 1
- November 2017 Disease Management (updated)
- March 2018 Canopy Management 2

Issues

- Focus Groves
  - Control vs. pilot blocks
  - Adopting recommendations
  - Harvesting full block
  - Anthracnose still an issue (e.g. causing reduction in fruit set and fruit rot near harvest)
- Funders
  - Pledges dishonoured
- Other Growers
  - Partial or no implementation
  - False prophets (copper, other unlicensed 'secret' products)
- Other
  - Adverse weather in 2016/2017 affected harvest (40% of groves had no harvest)
  - Travel costs and Olives NZ administration time under budgeted

Other Metrics and Comments

- Reduction in Cercospora and Peacock Spot with spray programme
- More than 120 people attended every round of the Focus Grove Field Days
- Sponsors also attended – Lakewood Products, Yamaha NZ, The Grove Supply Co.
- The processors have noted a marked improvement in fruit from those following the project. Plus little leaf and twigs and higher yields.
- Contract harvesters and most processors have a stated preference to work with groves that follow the Focus Grove practices.

Recommendations

- Continue with current project a further 12 months because of blip in 2017 with weather
- Apply for a new project (2019 – 2022) with key foci of Nutrition and Anthracnose control