

SFF&F Project 19025 – Meeting the increasing demand for New Zealand Extra Virgin Olive Oil

Milestone MS05 Focus Grove and Field Days Report

November 2021

Contents

Introduction	2
Focus Groves Status	4
Hawke’s Bay	4
Aquiferra	4
Nelson	11
Kakariki Olives, Redwood Valley	11
Beulah Ridge	16
Canterbury	20
Two Old Soldiers, Waipara Valley	20
Terrace Edge, Waipara Valley	28
Wairarapa	35
Leafyridge Olive Grove, Masterton	35
Bella Olea Olive Grove, Greytown	44
Northland	49
Olives on the Hill	49
General Comments	53
Harvest Data Comparisons	55
Summary	55

Introduction

The purpose of the Sustainable Food and Fibres Futures project is:

To increase the production of established olive groves to meet the increasing demand for New Zealand Extra Virgin Olive Oil. The target is an additional 5kg (20%) per tree.

A second objective is to develop an alternate/more organic approach to improving grove production.

The project uses five focus groves in each main growing region that have demonstrated a commitment to best practice principles. These groves have already implemented the recommendations of the previous Sustainable Farming Fund Project and have demonstrated their success. They will now implement and trial new approaches, measure outcomes and host field days to share their experiences with other growers.

The project also includes a number of groves who wish to trial an alternative or more organic approach to improving tree health and benefit from increased crop loads. These groves will also implement and trial recommended new approaches, measure outcomes and host field days to share their experiences with other growers.

The methods use expert tree crops horticultural advice focusing in four key aspects of grove management.

1. Introducing practical, affordable tree pruning regimes that improve light distribution for stimulating flowering and fruit growth, aiding effective spray coverage and inducing adequate annual shoot growth to provide the required bud sites for new flower production – on an annual basis.
2. Introducing an appropriate nutritional programme that will ensure there are sufficient nutrients for plant growth which will impact on yield.
3. Improving tree health by disease control using affordable protectant spray programmes to manage foliage diseases that defoliate olive trees, a primary cause of low productivity in NZ groves.
4. Developing an alternate/more organic programme methodologies that will improve tree health to manage foliage diseases as above.

This report outlines the progress made by the Focus Groves and is based on the fifth round of Focus Grove visits and Field Days held in October 2021, carried out by the specialist consultant engaged as part of the project; Dr Stuart Tustin ex Plant and Food Research.

There were some common topics covered off at all Field Days.

1. Local members were congratulated on their success in the 2021 New Zealand Extra Virgin Olive Oil Awards. With a new record entry and almost half of all entries being awarded Gold, the judges were very impressed with the overall quality of the entries.

2. It was noted that the Field Days, while focusing on improving production, have also had an unexpected part to play in improving quality. The Field Days, helped by the Processing Practices workshops, have enabled us to regularly talk about improving all aspects associated with the quality of EVOO; from grove management, harvest timing, speed to processing, processing practices, filtering/racking and storage.
3. The 2021 Grove Census Harvest Data Report has shown that all of the Focus Groves have out-performed their regional average in relation to volume harvest by tree.
4. This is the second to last of the Field Days under the current project. Given that these have been immensely valuable in sharing knowledge and observing results, people were asked to give some thought as to where to from here.

This round of Field Days was attended by a number of non-members of Olives New Zealand, in addition to members, as well industry contractors. Neil Smith attended Hawke's Bay, Canterbury and Wairarapa and Andrew and Jo Priddle attended Nelson as well as Wairarapa. These industry contractors provide valuable services to the industry offering pruning, harvesting and other grove management services. They made a valuable contribution to the Field Days, adding from their own experience.

There were a number of questions about the Organic Approach Fact Sheet developed by Olives New Zealand. This can be found here.

<file:///C:/Users/Olives/Downloads/Organic-Approach-Fact-Sheet-November-2019-1.pdf>

This report is based on the comments from the Focus Grove visits by the project consultant, Branch Chairs, Focus Grove owners and other Field Day attendees.

Focus Groves Status

Hawke's Bay

Aquiferra

Aquiferra is one of the original Focus Groves but was also an early adopter of the grove management principles. It is regarded as an exemplary grove.

Aquiferra was sold in April 2021 and the new owners are Tim Groves and Jess Arthur. Both are newcomers to the olive industry but Tim does have a farming background. Olives New Zealand is most appreciative that Tim and Jess have agreed for Aquiferra to continue as a Focus Grove.

The October Field Day was held on Wednesday 20th with a good turnout of 15 people. This included several new members; Dianne Wells and Kosta Piri, who brought a block off the Matapiro Grove, and Dianne and Grant Crosse, who have brought Kapiti Olives and take over in April 2022.

Geoff Crawford, Hawke's Bay Branch Chair and Olives NZ Executive member, welcomed everyone and introduced Tim and Jess. He noted this was the 2nd to last Field Day under the current project, so would like feedback on where to from here. He noted that the field days, courses, etc. run by Olives NZ have resulted in improving productivity and quality. It was hoped to run the next Processing Practices course in March 2022 if Pablo Canamasas can travel. Otherwise Olives NZ will try and find another presenter.

Geoff congratulated the Hawke's Bay members on their medals won in the 2021 New Zealand Extra Virgin Olive Oil Awards. This was 5 Silvers and 1 Gold. He explained how remote judging had been used because of COVID restrictions on travel. This resulted in the judges working through the entry at their own pace and avoiding palate fatigue. Remote judging runs at a cheaper cost and this was passed on to members in a reduced entry fee.

2021 Harvest Review

For 2021 the average harvest at Aquiferra was 19.14kg per tree and with 16.33% yield. The regional averages were 16.65kg and 16.93% respectively.

Tim said that Aquiferra had to harvest earlier than desired this year because of the availability of the contract harvester. This meant that fruit was not as ripe and was difficult to shake off. Quite a lot of fruit was left behind on the trees. The oil yield was also down because the fruit was a little unripe. Aquiferra had produced 1700 litres which was probably not going to be sufficient for forecast sales.

Disease Management

Tim said that he and Jess took over in April and were following previous owner Bob Marshall's advice in relation to spraying. So that meant the 20 day spray schedule. As a result the trees are looking clean and healthy. Tim says as flowering is now starting he plans to do Protek applications as per recommendations.

Stuart noted some scale has returned and Tim and Jess need to get advice from Horticulture on the spray regime required. In the past Horticulture has recommended Monarch which should be applied twice in January to be effective, however this was expensive. Ants can farm scale to feed on their excrement, therefore ants can indicate scale.

Nutrition

Tim said he had just done a Nitrogen application, which he had added to the Manzate spray. Stuart said he recommends a second application. Stuart noted that the leaf tests should be done in January and July to determine initially what needs to be applied and then to gauge effectiveness of the application. Stuart said soil tests should be done annually. Soil testing is an indication of the 'reservoir' available for the tree to absorb, whereas a leaf test is what the tree can access from this reservoir. Foliar feeding then gives trees instant access to the nutrients, whereas ground application fills the reservoir and you therefore lose control of the timing of the absorption.

Stuart drew to people's attention that the soil is showing plentiful worm casts and that the worms are doing a good job of working through any fallen leaves. Stuart noted that Olives NZ now recommends, that once an established herbicide regime is in place, a spring and autumn application is adequate for control. The latter only if required.

Post-harvest Pruning

Pruning has been completed and regrowth is looking good on all varieties across the grove.

Stuart explained how new growth is required each year as flowering is on last year's new growth. He noted that the Frantoio is already looking very good, but Picual looks to be a couple of weeks behind.

Other

Flowering is at different stages across the grove. Some trees are laden while other varieties appear to be behind this year. The flowering order looks to be Frantoio, Kalamata, Picual with a two week spread.

Geoff queried the impact of the mild winter of flowering as evidenced by apple growers using a spray to bring on budding. Stuart said there would be a lack of "chilling hours" because of mild winter. Chill hours would normally be around 1000 but there were 200 less this year in Hawke's Bay, more like about 800 hours. This may result in later flowering and more widespread flowering timewise across the groves in Hawke's Bay.

Stuart reminded that irrigation was needed otherwise fruit will shrivel and impacts oil yield. Hawke's Bay was effectively in the 3rd year of drought conditions. At Aquiferia, Stuart recommends separating the irrigation lines to one each side of the trees to improve effectiveness.

Geoff concluded by reminding those present that the Hawke's Bay branch is active and welcomes suggestions on activities.

It was suggested that a Facebook chat group would be useful for people to share what they are up to and to ask for advice. Dianne offered to set this up.

Geoff thanked all for their attendance and invited everyone to join Tim and Jess for afternoon tea. Thank you to Geoff, Tim and Jess for hosting this Field Day and for arranging the refreshments.



Out in the grove at Aquiferra



Stuart showing scale



Regrowth coming on around a major cut



More vigorous regrowth but being left in the meantime to ascertain stronger branches



Good discussions



Stuart explaining to Jess about new growth and where the new fruit will appear



Stuart showing Tim and Jess where to take leaves for leaf testing



Frantoio showing great buds developing



Stuart and Geoff hunting for buds on a Leccino tree

Nelson

The Focus Grove visits and Field Days were held on Tuesday 26th October. Previously Neudorf Olives has been part of the Project and following a reduced Manzate spray programme. This grove has been sold and the new owners have requested that the spray programme be ceased at this point. As nothing would be gained from visiting Neudorf Olives this time around, a visit to Beulah Ridge Grove was arranged instead. Details of the two groves visited are below.

Kakariki Olives, Redwood Valley

Ray and Brenda Gregory welcomed 17 people to their grove, including Andrew and Jo Priddle from Wairarapa and Chris Piper from Isobel Olives, Marlborough.

Gayle congratulated local members on their wins at the 2021 NZ EVOO Awards. Nelson members had won 5 Golds, 5 Silvers and 1 Bronze, as well as Best in Class. Marlborough had won 1 Gold and 3 Silvers. She talked about the Awards being judged remotely and noted that the quality improvement can be attributed to a variety of factors, including these Field days, courses, etc. She asked with project ending in 2022, for people to think about where to from here and to feed that back to Ray.

2021 Harvest Review

Ray said that despite having major harvester issues, Kakariki still managed to harvest an average of 14.36kg per tree across grove compared to regional average of 12.48kg. He said they had to wait about a month for parts and some areas, eg. the terraces were then not harvestable as too wet underfoot. He estimated they had lost about 25% of the potential crop. Even so, the Picual had harvested 35+kg per tree and the Picholene 20+ kg.

Oil yield ranged across varieties with the best being 17% for Minerva. The grove average was 12.98% compared to a regional average of 11.62%

Disease Management

Ray said that Wuxal/NPK is added to Manzate sprays @ \$30 ha. Wuxal is a general fertilizer. However no Manzate has been applied for 4 months because of harvest, so some disease has appeared. Ray said the chemical representatives had suggested using a product called Surewet to improve spray wetting, spreading and sticking, to be added to Manzate in wet conditions.

A question came up about what products are licensed for use on olives in New Zealand. Stuart noted that products being used are pretty much all 'off label' because they have not been approved for olives in New Zealand. This is because of the cost in the process. However he said that the products are effective in other fruit crops and cost effective so trialed as part of project and proven successful. Typically they are licensed overseas.

Sensitivity to Manzate has been reported, shown as skin issues. Alternative products are available but cost is an issue. Also some complaints from neighbours about the use of Manzate. Stuart said all members who spray any products, need to have done the Growsafe program to understand safety. For example the need to wash gear, including tractor and clothes, after application.

Stuart said that Leafyridge, Wairarapa is trialing the recommended organic approach in a separate section of their grove. The aim is to reduce the use of Manzate, but Stuart pointed out that this is in a grove where disease is under control. The aim to suppress disease not address disease problems. This is quite different from trying to get disease under control. It will be interesting to monitor this and see if the organic approach is sufficient to keep disease suppressed.

Stuart said that as an alternative to the Olives NZ Organic Approach, Biosea products were being used by an organic grove in Wairarapa. That grove was also doing a major grove renovation. Once again it will be interesting to see how effective their programme has been.

Andrew Priddle recommends the use of 10 WG with Manzate or Copper with Sulphur once as an eradicant to clean up disease. This would usually be the first spray post-harvest. He said it was cost effective to add the Score to Manzate.

Stuart added that Score 10 WG is a fungicide used for the control of Blackspot in Apples and Pears, and Powdery Mildew in Apples. He agreed that the additional cost was worthwhile where disease was otherwise under control but said two applications are recommended..

Hilary Fenemor raised that they had been sent an MPI questionnaire about information on sprays used, residue issues, etc. She had been looking forward to a report back on the findings but had not received anything. Andrew said he thought this was a survey of food producers in various regions as he had received a questionnaire also.

Nutrition

Ray said that they had spilt their fertiliser application in two over the year. He noted that Magnesium and Potassium were needed.

Post-harvest Pruning

Pruning is halfway through and it is now quite evident which branch to remove on a tree, that being the tall ones initially left for production. It was noted that there is very good leaf coverage through trees, including the tall branches.

Other

Hilary, who is also one of the NZ EVOO Awards Judges, commented that a drought year had resulted in intense oils last year, whereas this year plentiful rain prior to harvest saw more medium oils.

Flowering is just coming on through the grove. Stuart said flowering is looking very good but suggested the eradicant application, previously discussed, applied now would help address current disease and then the Manzate sprays deals with future control. Stuart recommends this fungicide is added to the Manzate for two applications; now and then again after two subsequent sprays.

Thank you to Ray and Brenda for hosting the visit, the visitors and organizing another great BBQ lunch. Thanks to members who brought a plate. It is always enjoyable to catch up informally after the work has been done.



Ray discusses 2021 harvest



Out in the grove



Stuart discusses why to leave new growth to sort itself out



Stuart pointing out new branch nodes coming on



Rachel Costello admires the new growth and buds



Pruned for regrowth and production

Beulah Ridge

Greg and Lois Anderson had invited the Field Day to view Beulah Ridge at Upper Moutere and hosted our visit. Attendees much appreciated the opportunity to visit this property as it is another of the largest groves in the Nelson area.

Greg explained that Beulah Ridge is a 17 ha shared property with 9 ha in olives and with 11 houses. There are approximately 3500 trees, mainly Frantoio and Leccino but also Barnea, Picholene and Picual and a few Manzanilla. The property is quite steep in places and areas of the grove are in dips and quite wet. All of these factors make harvesting a challenge.

The bulk of the trees were planted around 2000 and the grove is owned in common by the residential lot owners. After a period of 10 years when the grove was leased, grove maintenance became the responsibility of the residents. This has resulted in a less than ideal amount of pruning being carried out over the intervening years. Contractors are used for weed spraying, mowing, mulching and harvesting. The property has no commercial equipment of its own.

Pruning in the last 4 years has been managed by a number of residents, however only 500 - 800 trees have been pruned each year with a focus on the Frantoio, Leccino and Picual, as neither the Barnea nor Picholene were harvested during this period.

This year there was 39 ton harvested, believed to be the best ever year with 12.5% yield. It was noted that previously yield has been up to 19%.

There has been an annual application of Olive Mix and an application of Lime in 2021, with soil and leaf tests being carried out in alternate year. Stuart commented that given the last reported Ph level was a little low, another Lime application may be beneficial in 2022 and fertiliser application twice a year.

Currently the Frantoio are being pruned. There is a trial of grafting Frantoio onto Barnea with some success. It was noted that some of the Barnea trunks are too large for the machine harvester. It would be better to coppice these at ground level, allow new growth and then graft on to this.

Stuart suggested removing the worst diseased branch off each tree each year. He said that new growing branches are being suppressed by diseased branches that need removing. It was noted that currently trees are being pruned every 4 years at most, Stuart suggested focusing on half the trees more frequently. New flowering is looking good for 2022.

The afternoon concluded with afternoon tea provided by Greg and Lois. Many thanks to you both for your hospitality and the opportunity to visit Beulah Ridge.



In the grove at Beulah Ridge



Bushy new growth on pruned tree



Stuart discussing pruning



Good regrowth now needs tidying up



Frantoio grafted onto Barnea



Frantoio grafted on to Barnea stump

Canterbury

More than 30 people attend the Canterbury Field Day on 27th October. This was a great turnout and included non-members and visitors from Lincoln University and Steve Morris from Central Otago.

Branch Chair and Olives NZ Executive member Alan Blakemore welcomed all and congratulated local members on their performance in the 2021 NZ EVOO Awards. He noted that five members had entered and won 19 medals, including 6 Golds, 11 Silvers and 2 Bronze. He encouraged other members to enter in the future as medals on bottles assist in sales.

Alan also noted that the current Focus Grove Project was due to finish in 2022 so feedback was being sought from members on where to from here. He encouraged members to think about co-operation on Canterbury regional initiatives including attendance at fairs, marketing, etc.

Sally McKenzie mentioned that Helen Clausen's memorial was on Friday. She said that Helen was one of the people responsible for the establishment of olive growing in Canterbury and she would be proud of the momentum of local growers and their successes. Sally said that Helen's original grove had been purchased by Sarah McGrade and Glenn Hughes, who were in the process of rejuvenating the grove.

Two Old Soldiers, Waipara Valley

It had been arranged to visit Two Old Soldiers Grove, across the road from Terrace Edge, and owned by Gordon Legge and Louise Webb. This was to enable a demonstration of the machine harvester, as the grove had not been harvested, and also a demonstration of how to rejuvenate neglected trees. Neil Smith would be working with Gordon on pruning the grove and getting its transformation underway.

Malcolm pointed out that the trees were still laden with black fruit and he estimated some trees had up to 25kg. He then proceeded to shake three of the trees. Malcolm explained that the trees have not been pruned and therefore dense, which has impacted on getting fruit off. However he still got off maybe 15kg per tree.

Stuart noted the trees are starting to grow the next ring of trunk growth and quite soft. So there was a bit off trunk damage from the clamp. He explained the trees are in poor shape with deadwood in the canopy and a lot of disease. He pointed out there was little new growth for subsequent fruiting. Stuart explained about the three main diseases affecting olive trees in New Zealand (Peacock Spot, Cercospora and Anthracnose). He emphasised that proactive input is required to control disease. There are Fact Sheets on Canopy Management and Disease Management on the Olives NZ website under the Focus Grove section.

Stuart said that other groves in the area are in bud but there is nothing here so there would not be much to harvest in 2022.

Neil Smith said that while the current crop was 20-25 kg, there would have been no crop for the previous 2 years. If left this pattern will continue or worsen.

Stuart pointed out there was no regenerative growth on old pruning cuts because the canopy is full of dead wood and blocking light penetration. He said the trees need transformation to stimulate regrowth and the tree height needs to be controlled with big low branch cuts. Stuart said it was ideal to start pruning after harvest but this can be done through flowering if needed.

Neil explained with Leccino you need to leave a longer stump to enable regrowth, different from other varieties. He said if a tree is very tall you can either remove 1-2 branches each year over a period of years or coppice. He said that with pruning, large branches are good for firewood and mulch everything else back into grove.

Malcolm suggested doing a hard prune of the Barnea because of their size, which will impact on harvest for a couple of years, and allow harvest of other varieties.

Stuart recommends using Barkseal or similar on major cuts. He also explained about off-label use of products authorized on other crops in New Zealand.

Alan said that pruning is quite different for hand held branch shakers, where you want a shorter and more spread tree. He added that local wood turner's welcome the olive wood and will take the fresh wood to age themselves.



Two Old Soldiers Grove - Malcolm explains machine harvesting



Machine harvester - net goes around the tree



Machine harvester in action



Neil explains which branches to remove



Neil in action



Neil about to prune a Picual



Job done



Stuart explaining the difference for machine and hand harvesting



Stuart explaining how buds will come on under the cuts



Tree opened up for light and now suitable for machine harvest



Suckers need removing - good job for sheep

Terrace Edge, Waipara Valley

Bruce and Jill Chapman welcomed people back to Terrace Edge and where we all enjoyed a shared lunch.

Terrace Edge is one of the original Focus Groves.

2021 Harvest Review

In 2021 Terrace Edge harvested on average 11kg per tree and with 9.53% yield. The Canterbury regional average harvest was 10kg per tree and with 13.2% yield.

Bruce said harvest potential was probably 15kg per tree but not all trees were harvested so that pulls the average down. He also looks for trees to have more than 10kgs or else marks the trees to be left.

There was discussion on average crop load. When the initial project started the national average was less than 5kg per tree and we have lifted this to 10kg for the first time this year. The target with that project had been 15kg for the Focus Groves but they actually achieved 25kg. The current project is to lift the average harvest by another 5kg. Typically the Focus Groves significantly out-perform their regional average. Leafyridge Olives in Wairarapa did a second harvest by branch shakers in 2020 after the machine harvester, this netted another 5-10kg per tree. That is actually more than a lot of groves harvest in total.

Disease Management

Bruce noted that the first application of Protek is due.

He has consulted with organic vineyards and they support the suggestion of similar approach to the Organic Approach developed by Olives NZ. Terrace Edge now ready to look at introducing a more organic approach, especially as disease is much more under control. Stuart commented that Leafyridge Olives, Wairarapa will be using Serenade as a more organic alternative to Protek.

Malcolm said that he is using Champ or Nordox (Copper products) as an organic alternative rather than Manzate and Protek on his leased grove. He now does four sprays per year and is also using Boron.

Stuart pointed out that Malcolm had previously sprayed monthly and his current programme is not sustainable. While the grove is carrying the benefit of the previous programme, it will crash and disease will become a problem again. He said the Olives NZ Organic option has been based on success in other crops and frequency of spraying is integral to this approach, as with Manzate, in suppressing disease. Stuart said the risk with Malcolm's approach is that disease will quickly take over and set the grove on a backward path. He strongly recommends following the organic program developed by Olives NZ.

Stuart said that a heavy fertilizer program can mask disease through vigorous growth. Trees become like a thicket with green leaves and fruit around the outer and dead wood inside the canopy. There is poor productivity with this approach.

Stuart said an eradicant spray is being tried in Nelson. An additional fungicide (Score) is added to the Manzate for two applications now and then again after two subsequent

sprays. This added investment is worthwhile in a commercial grove to get on top of underlying disease and minimise impact on crop.

In response to a question about the threat of pests to olives in New Zealand, Stuart advised that the antifungal programme only is required. Fortunately we don't have the pests that cause major problems in Europe and even Australia.

Nutrition

Stuart commented that clover is good ground cover and an alternative to using herbicide. In any event, Olives NZ now promoted only doing one herbicide or a maximum of two sprays per year.

Stuart said the foliar leaf test is looking good. Calcium and Magnesium are a little light. Bruce said a boron, iron and magnesium foliar spray will be applied.

Stuart suggests doing a soil test and spring is a good time so as to be able to address any issues now before fruit set. He recommends that growers contact their horticultural supplier to have the test done and they will provide results and recommendations.

Post-harvest Pruning

Although the trees are looking really healthy, Stuart cautioned the need to do Protek sprays to suppress Anthracnose. The trees are full of flowers, right through the canopy.

Stuart noted that the trees at Terrace Edge are now probably half the size they were when the project started and regeneration has been very effective. Trees are open with light penetration throughout.

Stuart said to look at the tree width to keep this within machine harvest umbrella. Pendulous and drooping branches don't harvest. Rigid upright trees shake well.

Stuart explained that branches with a couple of metres with no leaves are part of the legacy of the trees but the aim is to bring canopy down and these will be removed in due course.

Other

Bruce used irrigation every other day over summer, about 8 litres per tree.

Marketing

Bruce asked Gayle to talk about the potential for increasing oil sales as there was still a reticent to increase production and/or harvest to the full potential of groves in Canterbury. Gayle said as per other years, there is a demand for NZ EVOO by other growers. Price varies depending on volume. Typically oil is required to be certified, certainly National Programme registered. Growers will pay more if the oil has won a medal in the NZ EVOO Awards and they are given permission to use this. Note that sales of oil should be advised to Olives NZ should be advised to Olives NZ to enable a transfer of ownership and an issuing of a Certification Certificate in the name of the purchase.

However apart from The Olive Press, Wairarapa these sales arrangements are pretty informal. Typically growers with surplus oil will advertise on the Olives NZ website. Gayle said better organisation is required on a regional basis to create an EVOO 'bank', probably via the major press. There would then be opportunities then for inter-regional co-operation and sales.

Gayle said there is potential to look at creating a new, high margin market. She had raised an export prospective project at the Field Day in April and while people were interested, no one present was prepared to put their name forward. Rather it had been suggested that Ian Warren of Tuscan Downs might be the person who could drive this. Gayle had approached Ian who had discussions with NZTE and "Made" the North Canterbury group that supports the food industry. Ian has put together an international marketing concept.

Fortuitously Ian had come to the Field Day to discuss where he was at with Gayle. On the spot, he agreed to share this with those present.

Ian Warren said he thought too much effort was being put on production and not enough on sales. He said he had sold current oil at \$60 per litre in 4 litre containers. However he saw that an export market offered a much better return. Ian said super markets are not a good outlet for NZ producers so a new market is required.

He was looking at a project for sales to the USA. Perhaps a pack of six 50ml oils from different groves or different varieties that would be shipped in bulk and packaged in the USA. He had done some market research and it looked as though this could gross up to NZ\$185 per litre.

He said the packaging could draw on the already known New Zealand branding of Pure New Zealand and the All Blacks. Plus stories about each of the groves.

The project could expand to 250ml bottles and 4 litre catering packs if there was the demand. He suggested using social media and a website for promotion. He thought it might take up to 5 years to build a successful business.

Ian will do some more scoping work on the proposed project and will then convene a meeting of interested growers.

Alan thanked Ian for his presentation and said he would be watching progress with interest. Alan also thanked all present for their attendance with a special thanks to Bruce and Jill for hosting the Field Day.



Terrace Edge



Stuart showing new growth which was absent from the other grove visited



Neil explaining the need to create a clear pathway for new branches to grow upwards



Good regrowth on Leccino



Neil contemplating which branches to remove



Pruning in progress



Finished tree



Undergoing renovation, only a couple of large limbs to go

Wairarapa

The Focus Grove Visits/Field Days were held at Wairarapa on Friday 29th October.

Leafyridge Olive Grove, Masterton

Craig and Ruth Leaf-Wright hosted more than 40 people to Leafyridge, including members from Kapiti, including the new owners of Kapiti Olives, and Wairarapa.

Andrew Priddle, Branch Chair and Olives NZ Executive member, welcomed all and offered congratulations to those present on their success at NZ EVOO Awards. Both Wairarapa and Kapiti won more than a fair share of medals, including the top 5 awards. Andrew said that as this was the second to last Field Days under the current project, people might like to think about future directions for Olives NZ.

2021 Harvest Review

Craig said the average harvest for 2021 was 18kg per tree whereas the region average was 12.13kg. The average yield was almost 16% whereas the region average was 13.75%. Craig said he was very pleased with both the tonnage and yield. He said that the Focus Grove Project has seemingly addressed biennial fruiting for those following the programme.

Disease Management

Craig said the last Manzate application prior to harvest was on 15 April and then not again until end of July. Unfortunately there are now some signs of Peacock Spot from that intervening period. He says he may look at splitting harvest to enable the chance to minimise the break in the spray regime.

Stuart commented that was a good approach to managing disease but also pointed out the reality that there would always be some disease present. He suggested perhaps given the consistently high crop load Craig could look after harvest at adding an eradicant e.g. Score to the first and third sprays. This will kill the fungus rather than suppressing and the productivity is worth the added investment. This is the same recommendation as for Kakariki Grove in Nelson.

Craig said that he now had an organic trial block using Sulphur and Copper and no Manzate. This was the lower block nearest to the road and well separated from the rest of the grove. He was following the programme in the Organic Fact Sheet on the Olives NZ website. This trial was driven by some negative feedback from consumers about the use of Manzate.

The organic sprays and Manzate have both been applied approx. 3 weeks apart since the end of harvest.

Stuart said some people report sensitivity with the Manzate product because of other additives. He reminded that people using any chemicals should have done a Growsafe programme so that they understand safe practices. Stuart pointed out that Sulphur products, for example, also escalate respiratory problems. There are the same issues with

organic products as with other products.

Gayle said to remember that fruit is typically washed on arrival at the press, but most people would not have applied Manzate for 30 days prior to harvest. Olives NZ has carried out residue tests for glyphosate and Manzate with none detected.

Stuart summarized that we have an observation project in place with traditional method vs organic method. He pointed out that Leafyridge was in an excellent position to carry out this trial as the grove was in an excellent condition to start.

With flowering starting Craig said he would be doing three Protek spray applications as per recommendations. He would be using Serenade on the organic trial block although this is very expensive compared to Protek, approx. 4 times the cost. Stuart said that two applications of Serenade should be sufficient and this would help reduce the cost.

Stuart noted that herbicide spray only needed application once or twice per year. He also recommends leaving mowing a bit longer. This creates a sward which when cut creates a mulch. However, if hand harvesting then you need to mow short prior to harvest. Stuart said clover is a good contributor to Nitrogen.

Nick (Nicola) Smith suggested that weeds can contribute to eco system.

Nutrition

Craig said that copper oxide had been applied in late July and Seaweed Pronto had also been applied

A question was raised about leaf tip scorch found in the block closest to the house. Stuart thought this could be Potassium or Magnesium deficiency symptoms. He asked Craig to check the last leaf test results and also to check across the grove to see if it is occurring sporadically over all the grove or if it is located in just that corner.

Craig checked on the last couple of leaf tests carried out in April 2021 and November 2020 – both show Potassium at medium to high levels. Magnesium, however, on both was on the low side. He noted the only other thing that was also low on both tests was nitrogen and CAN and urea were put on after that. Craig said that there are actually very few leaves that have that scorched tip, most are healthy green. Craig was not worried about this at this point but would monitor the situation.

Post-harvest Pruning

Craig said pruning will get underway shortly but it was apparent that the trees are looking really healthy. Stuart said the grove is looking great even though pruning is yet to be completed. He said with luck and good management there looks to be another good crop possible this coming season.

Stuart added that too many people prune their olive trees like roses! He said the first prune should be with the chain saw. Once regenerated a pole saw may be used for finesse.

Other

Craig said he did not start irrigation until January because of good rain whereas normally this would be Nov/Dec.

Trees are looking very healthy, full of green, healthy leaves. They are full of new buds, right through the canopy.

Stuart said from fruit set onwards to watch that shoots are growing approx. 20cm from new olives. Otherwise there will be a poor crop next year as short shoots support minimal fruit next year. If new growth is not apparent and the crop looking good, Stuart said to then cut out some branches. Especially if branches are blocking spray penetration or there are branches that won't shake or fall outside the harvest umbrella. This will allow the tree to put more effort into extension growth.

Thank you Craig and Ruth for hosting our visit. Also thanks to Ruth and Andrew for organizing the lunch at the Gladstone Inn.



Leafyridge Field Day



Flowering at Leafyridge



Tree laden bottom to top



New growth



Stuart is very impressed with all the new growth



Craig shows a branch he will remove to reduce crop load and encourage new growth across the rest of the tree



Andrew points out new growth that has not fruited – Stuart says to take out the branch above to allow sun penetration



Neil takes out the branch to open up the tree



The opened up tree



Craig explains that while this tree has only two limbs the canopy is too dense to support new buds developing



Stuart using a pole saw to remove old dead branches to open up for light as well as to remove dead wood that encourages Anthracnose



Burnt leaf tips



Lunch at Gladstone Inn

Bella Olea Olive Grove, Greytown

Chris Penman welcomed 30 people to his grove, including people from Hawke's Bay and others who are specifically interested in an organic approach. The Penmans' should achieve certification as an organic grove this year and are to be congratulated on their commitment.

2021 Harvest Review

According to the Grove Census, Bella Olea harvested on average 10.77kg per tree across the grove. That is a very good figure and similar to the national average.

Chris noted that the Leccino did almost 20kg per tree.

Disease Management

Chris only uses Biogro certified products, including Biosea for both disease management and nutrition. He is concerned about the amount of lichen in the trees and is looking at a Sulphur spray to address this. He said that the lichen shakes off and ends up with olives going to the press. Fortunately the press has a good leaf removal system that also removes the lichen.

Stuart recommended Chris use Kumulus to address the lichen issue and alternate this with Biosea. This should also help reduce Peacock Spot. Chris said he is not quite making the monthly spraying as previously recommended. The application rate was 500 L per ha.

It was disappointing to see the level of disease across the grove. It certainly has gone backwards from April, when it had been looking really good. It is apparent that there has not been enough spray applied and disease has come back.

Ricardo Simari from The Olive Press said that the trees were far too big for the application rate and Chris should consider doubling his spray application rate per ha to 1000 L per ha. This will effectively double the amount of fungicide being applied so should also be beneficial.

Nutrition

Chris wants to know how much Nitrogen he removes with the olive crop so he can replace this with his fertiliser programme. The driver is that he is thinking about improving nutrition for the grove.

Stuart said this was a very good point and everyone should use this information to help inform nutrition/fertiliser programmes specific to their groves and varieties within. He undertook to track down this information for Olives NZ to circulate.

Post-harvest Pruning

Chris said there was another 2-3 year's work required to remediate the grove as the trees are still very tall. It was apparent that quite a lot of new buds have been eaten off by the sheep that graze the grove. This could be addressed by making cuts higher so they can't be reached. Chris said he intends to continue to use sheep for weed control and is spreading their wool around the trees for mulch.

Unfortunately the majority of trees are not looking good, there is little new growth and lots of dead wood and lichen, as previously mentioned. There are hardly any shoots from previous cuts and a lack of leaves on many trees.

Other

It was encouraging to see the amount of flowers on some trees / varieties - certainly better than zero. It looks like the Frantoio will have nothing. This grove is still in biennial production mode as there was a huge flowering last year.

Chris asked about putting in a bore and irrigation but Stuart said would depend on cost and return.

Thank you Chris for hosting our visit and being so willing to share your views and being open to other suggestions.



Bella Olea – out in the grove



Dead wood in the canopy



Bare branches and no flowers



Pruned but full of lichen and new growth munched off by the sheep



Disease is back



Above and below - some new growth is encouraging, above the sheep munching line



Northland

Olives on the Hill

This grove is one of the original Focus Groves and has benefited from continuous improvement to overall grove health and increased grove production. In 2021 Olives on the Hill produced on average 6.09kg per tree and with 15% yield. The Northland regional averages were 3.87kg and 16.3% respectively.

Unfortunately the travel restrictions imposed under COVID within Northland, Auckland and Waiheke Island have meant that it has been impossible to schedule a visit to Olives on the Hill in latter 2021. Rather the next visit will be in March 2022 and then another visit will be scheduled before the end of August 2022. This approach would offer a much better opportunity for the grove to implement any recommendations received in March and for the results to be then monitored/reviewed six months later. The two visit approach in 2022 would also encourage better engagement of the wider Northland/Auckland/Waiheke Island people.

However, in the meantime we are most appreciative to Linda Smith for providing the following update and photos.

The grove was subdivided in March/April reducing our trees from around 1300 to 785. The main varieties being Frantoio and Leccino, with a few Ascolano, Barnea and Manzanillo.

The renovation process is pretty much completed and you will see in the photos the size of the trees now. When we started the trees were huge, so there is quite a difference!

The trees are loaded with flower at the moment, so we are hopeful for a good harvest next year.

Chris has applied Protec along with the Manzate since the flowers first appeared (three times). We have also applied a fertilizer mix containing Lime, Potash, Phosphate, Kieserite, Sulphur and Boron.



Pruning in progress



Ready for mulching



Pruned Trees



Coppiced regrowth



Above and below - great regrowth





Flower buds



Flowering looking very promising

General Comments

The participation of the Focus Groves is much appreciated and critical to the success of the project. They have shown an unquestioned willingness to follow recommendations and incur the associated costs. As well as welcoming other members to their groves and providing hospitality. Thank you all.

A new innovation is being trialed at two of the commercial groves involving the use of an eradicator spray to get on top of disease that has occurred over harvest.

Leafyridge Grove, Wairarapa is also doing a trial of the Organic Approach developed by Olives NZ in part of their grove. This will be very valuable in ascertaining the effectiveness of that approach in a grove where disease is already under control.

Harvest Data Comparisons

The following table shows the harvested kg per tree compared to regional average for the Focus Groves. In all regions the Focus Groves have continued to out-perform the regional average, substantially in Wairarapa.

	2018	2019	2020	2021
Aquiferra	28	18	21	19.14
HAWKE'S BAY	22	4	4	16.65
Olives on the Hill	28.6	8.7	16	6.09
NORTHLAND	3.7	2	4.6	3.87
Kakariki	15	18.6	13	14.36
Neudorf		8.5	10.6	-
NELSON	4	18.6	5.8	12.47
Terrace Edge	1	5.8	11	10.77
CANTERBURY	1	1.8	1.7	10.08
Leafyridge	25	8	25	17.52
WAIRARAPA	6	3	3	12.13

To view the full 2021 Grove Census Harvest Data Report:

<file:///C:/Users/Olives/Downloads/2021-Grove-Census-Harvest-Data-Report-2.pdf>

Summary

All of the original Focus Groves visited as part of the Field Days that have been following the recommended programme for proactive disease management and canopy management have reached an exemplary stage and are exemplars for the wider olive growing industry in New Zealand. For other groves following the recommendations, the results are apparent in their harvest tonnage as well as their observations on overall grove health.

The vastly improved tree health is apparent across all of the 'Manzate' groves visited with very little or no disease and plenty of lush leaf and promising flowering coming on. The tree structure also across these groves has dramatically improved, enabling light and spray penetration and ease of effective harvest.

The organic approach grove had a record harvest but the grove health has deteriorated. The owner is open to implementing new advice to address the current issues and hopefully to address biennial bearing for the future.

The three Fact Sheets associated with this project have been reviewed. The Disease Management Fact Sheet has been updated and re-issued to incorporate the information from the Anthracnose Bulletin. This is now a comprehensive document that has all of the current advice. The Fact Sheets will be reviewed again ahead of the March 2022 Focus Grove visits and Field Days. The updated Disease Management Sheet can be found here: [file:///C:/Users/Olives/Downloads/Disease-Management-Fact-Sheets-updated-October-2021%20\(1\).pdf](file:///C:/Users/Olives/Downloads/Disease-Management-Fact-Sheets-updated-October-2021%20(1).pdf)