



## **SFF Project 404831 Interim Project Status Report**

### **Increasing the Market Share for New Zealand Olive Oil**

**February 2017**

#### **Introduction**

The purpose of the Sustainable Farming Fund project is:

**To increase the market share for New Zealand produced olive oil by identifying basic grove management practices to enable the industry to consistently lift productivity of fruit per hectare and thus also reduce costs. This will allow the New Zealand industry to compete effectively with imported olive oils to increase market share.**

The objectives to achieve the purpose are aimed at practice changes that enhance tree and grove productivity.

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

1. Improving tree health by disease control using affordable protectant spray programmes to eliminate foliage diseases that defoliate olive trees, a primary cause of low productivity in NZ groves.
2. 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.

This interim project status report outlines the progress made by the Focus Groves on following the recommendations from the Focus Grove visits. The visits were carried out by the two consultants engaged as part of the projects; one from Plant and Food Research and one from Forty Groves Ltd.

The reports have been completed by the Focus Grove participants and also detail any issues encountered in following the recommendations.

The Summary Report has been prepared by the Project Consultants.



## Focus Grove Reports

### [Aquiferra – Hawke’s Bay \(Bob Marshall & Shona Thompson\)](#)

We have continued with our standard spraying regime at Aquiferra - Stuart and Andrew did not recommend any changes there. Stuart's recommended pruning was carried out on the 3 rows of trees (1 each of Frantoio, Leccino, Picual) which entailed less work than we would normally have done.

We had a reasonable fruit set, but not as large as last year.

Our well ran dry between Christmas and New Years and so the trees have not been irrigated since then. As of yesterday we have had 23 mm of rain since December 20th. We have a few yellow leaves (more on the 'Stuart pruned' trees as they have more foliage) and the fruit does not seem to have increased in size since early January. The trees are not dropping fruit at this stage.

### [Kakariki – Nelson \(, John & Helen Dunlop\)](#)

There have been no hidden surprises as a result of the Focus Grove Project now being under way properly. Stewart's and Andrew's recommendation have been pretty much the mantra that we have followed from the outset of the project.

We have struggled this year to keep up with the pruning programme as efficiently as we would have liked because of our work load with still developing our processing press infrastructure. We will be doing a lot more secondary pruning than normal before harvest in an attempt to get back on track with our restructuring pruning. Part of the problem is not wanting to compromise our market share by going too hard out on the pruning and losing too much crop while at the same time not reintroducing any biennial bearing tendencies. The March field day will be important to us in refining our strategy for the balance of this season.

We have invested in a higher spec blast sprayer to help overcome the problems of coverage on our big trees which has taken some of the pressure off us to reduce our tree size too quickly. This has been the biggest expense that may not have occurred if we were not part of the focus grove project. All other costs are as expected. The donation of 4 bags of Mancozeb was much appreciated.

### [Terrace Edge – Canterbury \(Bruce & Jill Chapman, Amberley\)](#)

We increased our spray schedule but it was extremely wet up until December and we still have peacock spot- may need to do more next year if again wet. Pruning is a work in progress. We also did a huge development on our cellar door which went into the end of



November which put me behind on pruning. No other projects this year so will be better prepared.

The crop is looks okay but not quite as good as last year.

Time was the limiting factor!

#### [Leafyridge – Wairarapa \(Craig & Ruth Leaf-Wright\)](#)

Since the last Focus Grove day, I have stepped up my spraying of Manzate to every 3 weeks as opposed to every 4 weeks.

I must say that I do not see much in the way of disease on the leaves although there is a greater incidence of yellow leaves on some manzanillo and Leccino trees this season.

I suspect however, that this has more to do with the lack of water - most likely a carry-over from the severe drought we experienced last year.

I began irrigating in December 2016 at about 25L/tree/day. We have had minimal rain since December and it has been hot and windy.

Fruit set is reasonable across varieties but better on Leccino than Frantoio this year. I have noticed that the small olives have set in bunches rather than individually which I see as a sign of good pollination.

I have continued with the pruning recommended by Stuart and Andrew, especially on the older (15yrs) Frantoio and Leccino. I am taking the approach of one really major branch removed as low down as possible to stimulate new growth and open up the canopy.

I am also trying to ensure that in doing this I also improve the spray penetration.

Previously pruned trees are showing good new growth.



## Summary of Focus Groves Status

### Terrace Edge Grove, Canterbury

These trees are the smallest canopy volume trees of any of the focus groves being lower in height and somewhat windswept from the north-west. Most of these trees don't exceed 3.5m in height. Recommended pruning to date has been to undertake one to two significant pruning cuts to open the canopy to access sunlight to the internal part of the tree to begin rejuvenating the canopy. The consequence of this will be better access for spray penetration and a reduction in wind from the prevailing nor-wester. Overall the leaf disease level in the canopy is low, the dry climate of the Canterbury assisted in combination with a fungicide programme.

### Kakariki Olives, Nelson

This grove is grown on clay soil. It is the highest rainfall region for a focus grove. These trees are the tallest of any of the focus groves and the soil type retains moisture for the longest period. To maintain lower levels of disease infection the most intensive spray programme of the focus groves is necessary. The canopy health looks good but requires constant canopy help and a willingness to spray as the weather requires. Pruning at Kakariki is firstly driven by the need to reduce tree height. Some trees are reaching 6 and 7 m in height which is having a shade effect to adjacent rows and the height is out of the capability of the spray machinery to apply chemical adequately. The pruning strategy of reducing one high limb per year is resulting in rejuvenation of the trees lower down and looks positive at this stage.

### Leafyridge, Wairarapa

An east coast grove with good drainage in dryer conditions. The pruning strategy that has been undertaken is removal of one to two limbs to open a portion of the canopy to begin a rejuvenation cycle and provide better drying conditions and a reduction in wind damage. Leaf disease level is low. Some evidence of yellowing leaves through the grove appear to be compounded from the severe drought of 2015/16. A large crop was harvested in 2015/16 and the return crop of 2016/17 is looking promising.

### Aquiferra, Hawkes Bay

This grove has been sprayed regularly and shows a very low level of leaf disease. At the last field day the pruning undertaken in spring of the 2016/17 season was discussed and considered to have been a heavy prune. Following the field day three rows were pruned in a lighter manner as a direct comparison. January 2017 the well has run dry and it will be interesting to observe prior to harvest the benefit or not of a heavy prune in a dry year.



[Olives on the Hill, Chris & Linda Smith, Mangawhai.](#)

Whilst outside the scope of the Sustainable Farming Fund Project, this grove in Northland has been used as the focus point for olive growers in the upper North Island.

This is a sub-tropical location with very regular rainfall requiring very regular spraying to keep the leaf disease at an acceptable level. As with the Nelson grove the contour of the grove can make spraying on hills in wet conditions a challenge. Leaf canopy disease level has improved with regular spraying. The pruning regime has involved an additional one or two large cuts in an attempt to reduce height and these trees are at the maximum of the tree-row volume of this spacing. In addition to the canopy management and disease management on the focus grove there has been the interest in the coppiced Leccino block and the grafting undertaken nearby.

[Overall:](#)

At the last round of field days prior to and during flowering discussion was had regarding the effect of anthracnose to flowering. This will again be an interesting topic at the next field day as fruit load will provide evidence of any incidence.

The cultural practice of pruning removal of several large limbs to open the canopy, reduces height and volume of the tree, increases sunlight access inside the tree, combined with improving wind access to encourage drying of the canopy post rain. It also consequentially provides better access for spray penetration.