

Training Needs of Small-Scale Forest Owners

Report for Forest Growers Levy Trust project 2023

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Executive Summary

The Insights and Opportunities Report on Education and Training Opportunities for Silviculture and Harvesting (2022) identified that the learning and training needs of small-scale forest owners (SSFOs) were not being met.

This study sought to review and confirm the training needs for a very diverse sector of the tree growing community and to make recommendations.

An on-line google documents survey was offered between April and late June 2023. Although only a small proportion of the SSFO sector were prepared to respond to the survey (143 responses), where data could be compared, results are not dissimilar to a larger survey carried out in 2015 (*Tree Grower* May 2017). This helps to validate the 2023 survey. Notwithstanding comparisons with other surveys, this survey does not claim to be representative of the entire SSFO sector but indicates a substantial need for various training options.

Findings

This study confirms that many SSFOs do not use the support of professional forest advisors. None of the sample group wanted to spend more than three days in training and most of them were more interested in the knowledge gained. They did not require a qualification. Newcomers to forestry and forestry professionals within our group relied on the media, websites, specialist magazines such as *Tree Grower* and meeting likeminded people at field days, for keeping up to date and making informed decisions. When offered choices within the practical, business related and regulatory fields, and for which options they wanted more information, there were significant information needs across most areas.

Potential training providers

For hazardous skill-based activities including chainsaw use, some private companies with accredited trainers/assessors and teaching to the Competenz Te Pūkenga unit standards have been identified.

The non-hazardous skills training and associated information and knowledge does not require a qualification or unit standard of achievement, so falls into the non-vocational education stream. We think that it is then out of scope for Te Pūkenga and the universities, so we did not identify any specific providers. A lot of online material can be made more readily accessible, perhaps in association with Te Uru Rakau-Forest Service advisors, the Canopy website or the Ministry for Primary Industries extension services supported by the NZFFA.

Recommendations

- That more of the specialist information from the NZFFA website be made accessible from Canopy, a perceived unbiased provider.
- That the NZFFA website itself be made more accessible for information and resources allocated to keep it up to date.

- Table 1 lists topics in order of preference. Of those, new technology and risk management are the main areas with a deficit of information.
- There is an opportunity for someone to create a structured non-qualification farm forestry training course similar to one operated from the Open Polytechnic in the 1990s. Financial assistance for a technical writer and moderator would be desirable.

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Background

Following on from a small survey of small-scale forest owners (SSFOs) in 2015, the 'Insights and Opportunities Report on Education and Training Opportunities for Silviculture and Harvesting' (2022) identified that the learning and training needs of this group were not being met.

Around 16,000 SSFOs currently provide about 40 per cent of Forest Growers Levy income, despite the fact that their businesses are usually a sideline and intermittent, that many of them have no professional forestry qualifications and that few are affiliated to any forestry organisation. The *Forestry Roadmap to 2050* aims to substantially lift the productivity and value of the industry and it is important that we bring these SSFOs along with it, but because forestry is not their day job, many lack the knowledge, practical and business skills to enable them to contribute.

Forestry training courses offered by Competenz Te Pūkenga and Canterbury University are aimed at people working in forestry full time. Little is offered to forest owners whose primary business is in a totally different area, but who want to run profitable part-time ventures growing and harvesting trees. The two-year diploma course in forest management (Toi Ohomai) or degree courses at Canterbury University are not suited to our target audience who are unlikely to take substantial blocks of time away from their usual employment. Larger scale operators within the SSFO sector are more likely to employ the services of professionals, particularly for harvesting and marketing, but many SSFOs do not seek professional advice. They would rather make their own decisions concerning forestry planning, establishment, management and harvesting, changing technology, legislation and compliance along with new market opportunities. SSFOs do not need to be experts in all these areas, nor do they need the physical skills to do every job, but they do need to understand the terminology, the risks and the paperwork involved in meeting their obligations and in contracting people to carry out the physical work safely.

Our target audience also includes pastoral farmers interested in using trees for greenhouse gas offsetting or for many other reasons on their farms. When this report was written, He Waka Eke Noa was still at planning stages, but it was announced by the Labour government that agricultural emissions would come into the Emissions Trading Scheme by 2025. The National Party was campaigning to postpone that date until after 2030.

The Forest Growers Levy Trust awarded funding to the NZFFA to confirm the learning and training needs of SSFOs, confirm the modes of presentation which best suit their needs and determine their willingness to participate in training.

In addition, this project will refine and elaborate an inventory of existing training resources suited to SSFOs and review the training available for its currency, accessibility, depth and relevance.

Strategies and Method

We have chosen to use the following definitions. The term 'training' is used regarding practical applications often targeted for teaching particular skills over a short period. The term 'education' involves theoretical orientation gained over the longer term.

Identifying the target audience

The NZFFA have commissioned research into identifying forest owning entities. As of 2023, satellite imagery and other information has identified over 16,000 forest owning entities with greater than 3.5 hectares of exotic forest. It is not known exactly how many of those are owned by affiliated members of the NZFFA. The membership of the NZFFA is about 1,500, and not all of them own

forests, but the NZFFA are deemed under the Forest Growers Levy to represent the larger non-affiliated forest sector who are eligible pay a levy. The National Environmental Standard for Plantation Forestry applies to planted forests over one hectare in size.

We have assumed that owners of forests will include forestry investors, such as members of syndicates, pastoral farmers with woodlots, urban forest owners living elsewhere and lifestyle block owners. This study also includes pastoral farmers with shelterbelts and riparian planting not covered by the National Environmental Standard for Plantation Forestry, perhaps wishing to use trees to offset greenhouse gas emissions from their livestock. Exotic and planted native forests both count for carbon sequestration and greenhouse gas offsetting.

Our audience for training needs also includes managers of woodlots and other professionals offering services to forest owners.

Documents reviewed

The following documents were reviewed to gain insight into the SSFO sector and their training needs.

- Qualifications Stocktake 2021, commissioned by Te Uru Rākau - New Zealand Forest Service on behalf of Forestry and Wood Processing Workforce Council.
- Forestry insights report *Education and Training Opportunities for Silviculture and Harvesting* February 2022 commissioned by Te Uru Rākau - New Zealand Forest Service on behalf of Forestry and Wood Processing Workforce Council.
- 'Survey of the needs of small-scale forest owners for information and decision support' Graham West and Dean Satchell, *Tree Grower* May 2017.
- *A study of forestry education in the current New Zealand school system* by Erica Kinder Southern North Island Wood Council and Canterbury/West Coast Wood Council, August 2022.
- Element Environmental Survey, October 2022, confidential report to the NZFFA.
- *The Survey of Rural Decision Makers*, Manaaki Whenua - Landcare Research, series.
- A general internet search for availability of forestry courses.

Following this review, we extended the research with a specific questionnaire to SSFOs in order to gauge how representative of the forest sector they were and their willingness to participate in training. We compared the identified information needs with lists of various information guides, papers, short courses or seminars which are available from organisations such as the Ministry for Primary Industries, Beef and Lamb, Safetree, Worksafe, the NZ Forest Owners Association, land care groups and the NZFFA .

This allowed us to identify gaps in the provision of information or mode of delivery, indicate where new modules should be prepared and how website hubs such as Canopy could be improved. We also identified potential training providers for future involvement and suggest future funding strategies for any training development.

Findings

Description of target audience

The SSFO sector is quite diverse. It includes members of the NZFFA some of whom are livestock farmers, consultants, service providers, forestry investors and so not necessarily land owners, as well as lifestyle block owners and those who own or manage up to approximately 1,000 hectares of plantation forest. There are about 16,000 other forest owning entities with an interest in woodlots

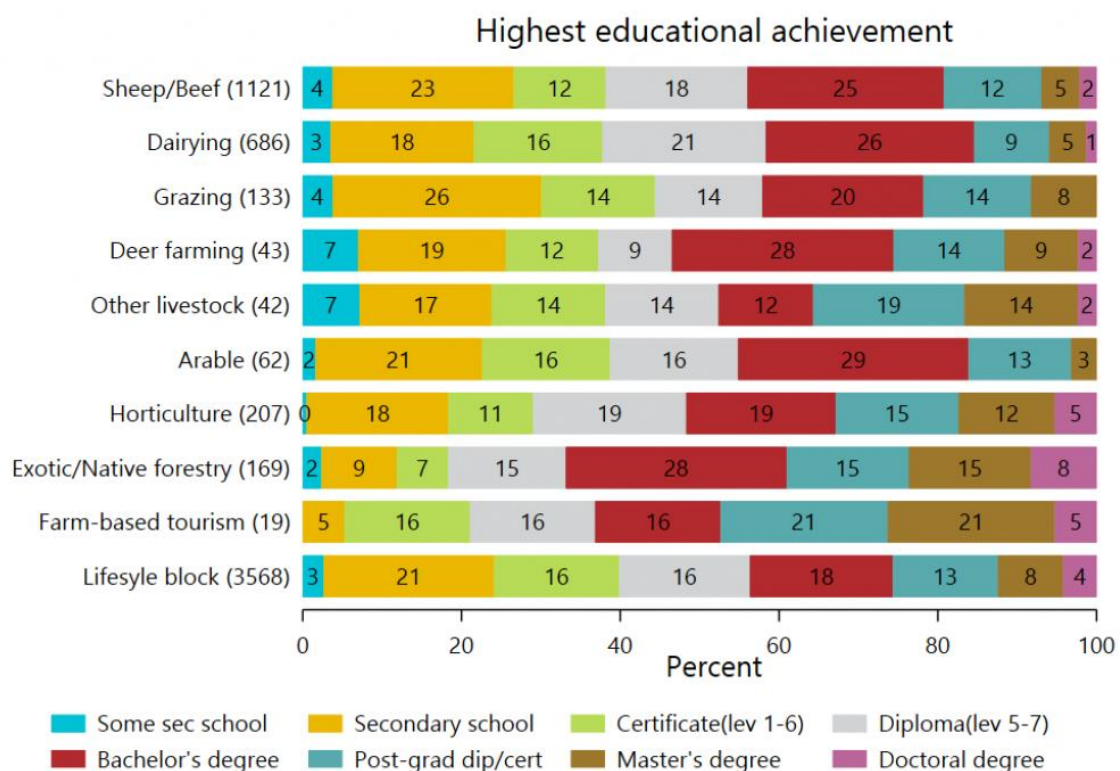
larger than 3.5 hectares who are not affiliated to a forestry organisation. The NZFFA has hard copy addresses for most of the latter group, but it is quite difficult to systematically engage with a representative cross section of the SSFO sector.

In view of the *Roadmap to 2050* and the Forest Industry Transformation Plan and intentions to raise productivity and environmental performance of the sector, we thought that it was important to include in our target audience pastoral farmers with riparian and shelterbelt planting and areas subject to native planting or restoration. As it turns out from our survey, there are also a lot of forestry professionals who appreciate access to, and keeping up to date with, the information that we wish to make available. This includes improved access to literature, industry magazines, information leaflets, seminars, workshops, short courses and field events.

Another insight into the rural population comes from the *Manaaki Whenua Landcare Survey of Rural Decision Makers* (2021) where over 6,000 people were surveyed. The question was asked about highest educational achievements. The responders were dominated by lifestyle block (3,568) with sheep and beef (1,121). Those involved with exotic and native forestry (169) were more likely to have a diploma or high-level university degree— 86 per cent of total, as shown in Figure 1 below.

Figures 1 and 2 are displayed with permission from Manaaki Whenua Landcare.

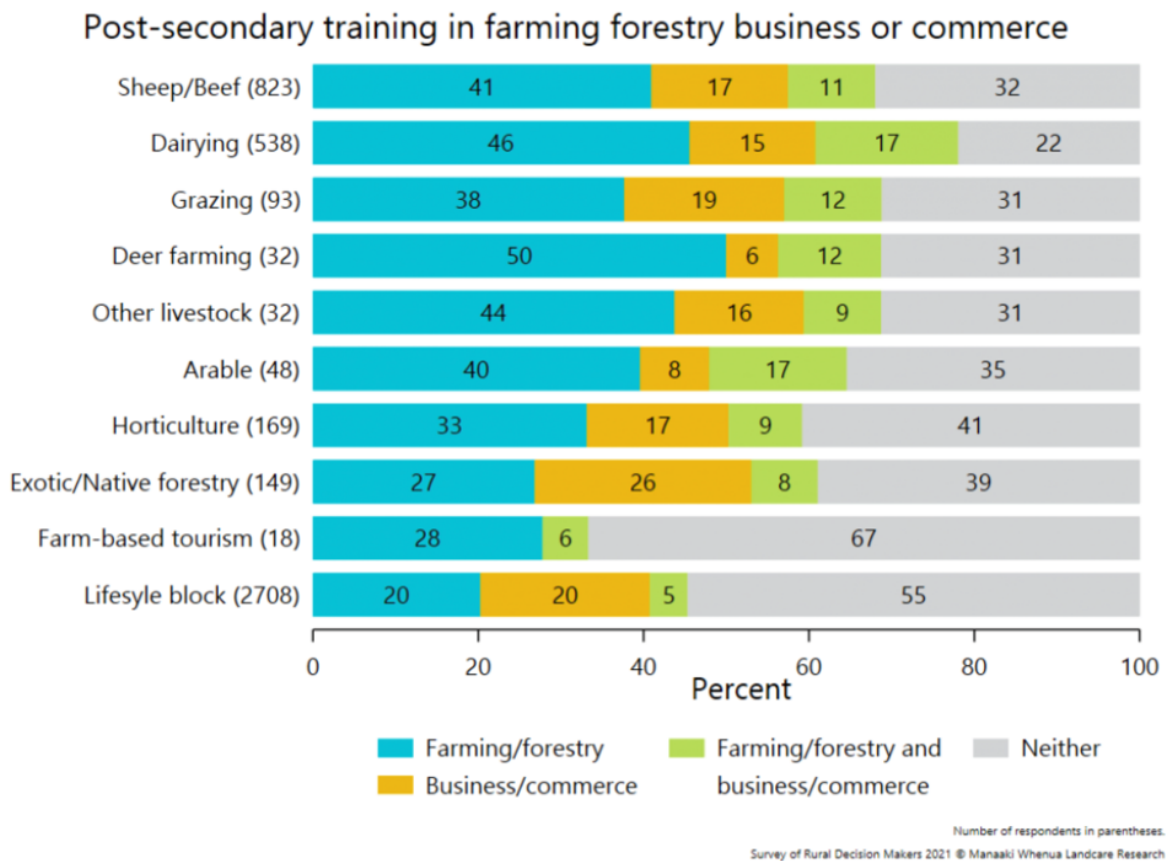
Figure 1. Highest educational achievement of the rural decision makers



Number of respondents in parentheses.
Survey of Rural Decision Makers 2021 © Manaaki Whenua Landcare Research

For those rural decision makers who held post-secondary school qualifications, their field of training and education is shown in Figure 2. For those in forestry, 35 per cent had farming and forestry or farming and forestry along with business or commerce qualifications, 26 per cent had just business or commerce qualifications and 39 per cent had no qualification related to either farming, forestry, business or commerce.

Figure 2. Type of Post Secondary Training Received



Surveys

2015 Survey

We reviewed results of an earlier survey carried out in 2015 (364 respondents) which was published in the *Tree Grower*, May 2017. The *Tree Grower* article is reproduced in full as Appendix 1 and draws its own conclusions. The survey was emailed out to 3,000 recipient addresses from the SSFO database created by NZFFA, and obtained roughly a 10 per cent response.

Comparisons of 2015 survey to 2023 survey

Different questions were asked but several question sets give similar answers. This provides validity to our smaller 2023 survey.

For the 2015 survey, under half of the email addresses would have been members of NZFFA, but 36 per cent said they were farmers, 26 per cent said they were foresters, 11 per cent were life-stylers. Often there was more than one answer per respondent. We think our NZFFA demographics are similar, with one-third each identifying as farmer or forester or others.

The purposes of their forest investments in 2015 were similar to our 2023 reasons for planting. Financial reasons dominated including diversifying, best land use, superannuation and succession planning, but environmental (26%) and aesthetics (18%) and recreation/lifestyle (16%) reasons were also significant. Perhaps more of our recent survey were interested in greenhouse gas offsetting (36%)

On property size, we arbitrarily used a different breakdown of areas. Our 2023 survey has higher input from owners of larger forests. Of the 2023 group, 25 per cent had forestry holdings larger than

100 hectares, whereas only 15.8 per cent of the 2015 survey had over 100 hectares. This will bias the 2023 results toward answers from those with professional forestry input.

2023 Survey

The 2023 questionnaire used for this project is listed in Appendix 2. It was provided as hard copy and also slightly adapted for use in Google documents and made available on-line. Most of the responses were received on-line. While many of the respondents are members of the NZFFA, we did attempt to get feedback from a more diverse rural sector by attending the Southern North Island Wood Council stand at the Palmerston North Rural Games, and twice at the Forestry Hub at Mystery Creek in November 2022 and June 2023. As you might suspect, only those field day patrons interested in trees would enter the Forestry Hub, and very few people had the time or inclination to spend five minutes filling out a questionnaire.

2023 Survey Results

A PowerPoint summary of the survey is provided in Appendix 3. Significant points from this are:

- A total of 60 per cent of respondents were over 60 years old.
- One third were in the 40 to 60-year age bracket.
- 89 per cent were owners, 32 per cent managers, 15 per cent shareholders, 10 per cent family beneficiaries and 8 per cent employees.
- Respondents came from all over New Zealand, but possibly were a bit low from Hawkes Bay and Tairāwhiti which had been hard hit by Cyclone Gabrielle a few months prior to the main survey period.
- On property size, 12 per cent had forests less than four hectares, 24 per cent had between four and 20 hectares, 39 per cent had forests in the 21 to 100-hectare forestry range, 18 per cent had 101 to 500-hectares and 7 per cent greater than 500 hectares.
- 95 per cent of responders were affiliated to the NZFFA, 17 per cent affiliated to Tānes Tree Trust, 11 per cent with the NZ Institute of Forestry and two per cent Ngā Pou ā Tāne. Only 3.5 per cent said they were not affiliated to any of the nominated forestry organisations.
- 17 per cent self-rated themselves with low knowledge and experience with forestry, 53 per cent medium and 30 per cent high knowledge. Comment: we think the knowledge base is high compared to the general rural population.
- Only 17 per cent of those surveyed had someone with formal forestry qualifications within their business.
- 52 per cent said they currently used a registered consultant or forestry manager for guidance. Note: Since this study population was overwhelmingly affiliated to the NZFFA, we imagine that many more of the non-affiliated people within the SSFO sector are not seeking professional forestry advice.
- For those who said no to having access to professional guidance, their average holding of forest was 34 hectares. For those who said yes, the average holding was 284 hectares, but some who said no, actually did have access to in-house expertise. The larger forest holdings were more likely to call on professional guidance. Comment: You might argue that many of the smaller holdings had not yet reached harvesting stage, but we do not know.
- The most common topic to seek advice was for harvesting at 64 per cent, followed by the Emissions Trading Scheme at 46 per cent and marketing 42 per cent. However, advice is frequently sought at all stages of the forestry cycle.

- Nearly everyone active in forestry was still trying to keep up to date with information. The forestry professionals were by no means absent from seeking opportunities to keep abreast of information.
- Reasons for intended planting over the next two years– 72 per cent of our responders cited timber crops, but 46 per cent also said amenity and enjoyment, 36 per cent said greenhouse gas offsetting, 34 per cent said water quality, 28 per cent said erosion control, 14 per cent said animal welfare. There were multiple reasons to plant trees, not all of them for direct financial gain.

Training needs, practical - 51 per cent wanted information on small-scale harvesting, 35 per cent on silviculture, 29 per cent chain saw use including thinning to waste, 27 per cent felling difficult or hazardous trees, 26 per cent on forest mensuration, 21 per cent fire safety and prevention. Only 22 per cent of our sample were not interested in practical training.

Training needs, business - 30 per cent of responders wanted information on new technology, grants and subsidies available along with pros and cons of the various plantation species. Roughly 20 per cent wanted information on forest management regimes, harvesting and marketing, risk management including climate change, forestry costs and whole farm planning. Only seven per cent wanted contract management and another seven per cent had no business-related training needs.

Training needs, regulations - Understanding the Emissions Trading Scheme was the standout request with 58 per cent asking for this. Environmental regulations such as the National Environmental Standards for Plantation Forestry, water and biodiversity came next at 35 per cent, health and safety 24 per cent, sustainable forest certification 15 per cent and no regulatory training needed at 11 per cent.

- On the preferred way to access learning, 70 per cent preferred local workshops and field events, 46 per cent said self-paced reading material, 47 per cent wanted a mix of practical and self-paced, 42 per cent wanted to connect with others in their area who had done similar in discussion groups and 20 per cent wanted on-line forums.
- On which days were best, 74 per cent said weekdays, 47 per cent said weekends, 23 per cent said week nights.
- On the length of time, 67 per cent said half a day, 31 per cent said a full day and 22 per cent said a couple of hours. No one wanted block courses of three days or more.
- Lastly, regarding the importance of gaining a qualification, 79 per cent said the knowledge only was sufficient, 21 per cent said they wanted a certificate and the knowledge. No one rated a qualification or certificate alone as the most important factor. Clearly the knowledge in most important to this group. Comment: Most of our group are not full-time forestry employees, so they so do not need a certificate or qualification to gain employment, but proof of training for hazardous activities could be important for ACC, or as a pre-requisite to more advanced training.

Identified training and education needs, information gleaned from surveys and indirect information.

Training and education needs are at two levels.

- Those new to planting were mostly requesting more information on plantation species, particularly alternatives to radiata pine, more information about the Emissions Trading Scheme and afforestation with native trees. This was gleaned from general conversations at

National Fielddays and at the Trees on Farms workshops run on behalf of Te Uru Rakau-New Zealand Forest Service by members of the NZFFA.

- Responders to the on-line survey were presented with options that prompted responders to acknowledge their wishes. Of the knowledge area options offered, perhaps the lowest score, contract management at seven per cent and with everything else above 15 per cent, indicates a need for information across all sectors of the forestry business. No training needs data is not tabulated here.

Table 1. Training elements ranked in order of preference

| Training Element | Per cent requested |
|---|---------------------------|
| Understanding the Emissions Trading Scheme | 58.0 |
| Small scale harvesting | 50.7 |
| Silviculture, planting, pruning, thinning etc | 35.3 |
| Environmental regulations | 35.1 |
| New technology | 30.1 |
| Chainsaw use and thinning | 29.4 |
| What species pros and cons | 28.7 |
| Grants and subsidies available | 28.7 |
| Chainsaw, felling difficult and hazardous | 27.2 |
| Mensuration | 25.7 |
| Health and safety as employer | 23.7 |
| Harvesting and marketing | 22.1 |
| Fire safety and prevention | 21.3 |
| Forest management regimes | 21.3 |
| Whole farm planning including tree planting | 17.6 |
| Forestry costs | 16.9 |
| Risk management including climate change | 16.2 |
| Sustainable forestry certification. | 15.3 |
| Contract management | 7.4 |

Elaboration of training preferences

Chainsaw courses

Some chainsaw courses are available from regional trainers. Local branches of the NZFFA or land user groups could arrange training courses for their areas. Refer to the section on suggested training providers for more detail on available courses.

Small-scale harvesting

The topic has been addressed by *Tree Grower* articles with examples of how various blocks of trees were sold.

We would not encourage amateur foresters to physically harvest their own forests. In addition, where a harvest is large enough to require notification, Worksafe will require evidence of training and safe work practices.

Woodlot harvesting for areas over one hectare are required to comply with the National Environmental Standards for Plantation Forestry, a range of notification requirements and as well as possible consents from local or regional authorities.

Worksafe has published a booklet *Managing a safe and healthy small forest harvest*, October 2016, ISBN: 978-0-908336-69-2 (online and as hard copy)

There are booklets and feature articles on continuous cover forestry such as totara harvesting in Northland.

New technology and what might it look like

- From the Forest Industry Transformation Plan, alternative species are intended to comprise at least 20 per cent of new planting by 2030.
- New concepts, carbon trading, bioeconomy, new end products
- Increasingly stringent environmental regulations.
- Probable restrictions of the percentage area of catchments which can be harvested at any one time. This may encourage plantation species which need longer rotation times or permanent forests which could be partially harvested.
- Substantial movement away from pine to alternative species, more likely for SSFOs.
- Expansion of the range of niche timber species and associated value chains.
- More planting of permanent forests, which are registered in the Emissions Trading Scheme and cannot be clear felled. Any partial harvesting must retain at least 30 per cent canopy cover per hectare.
- Permanent carbon forests older than 75 years may be eligible in the future to supply the bioeconomy with raw materials.
- In highly erosion prone areas at least, to transition from exotic to native permanent forest.
- Use of artificial intelligence.
- Increasing use of drones, lidar and satellite for mensuration, carbon accounting, forest health etc.
- Mechanisation alternatives for everything from seedling production, planting, silviculture, thinning, harvesting, post-harvest processing,
- Bio circular economy, fossil carbon substitution, novel products.
- Advances in small-scale harvesting on steeper sites such as winch-assist, use of forwarders, target diameter harvesting and air ship assisted.
- Tree breeding, breeding index, micro-biome, genome for more species than just pine.
- Adaptation of all forests to climate change pressures and other risks such as floods, fire, drought, storm, erosion, carbon sequestration and biodiversity
- Forestry regimes, ecological engineering using regenerative agriculture principles, integrating forestry and biodiversity issues and minimal impact harvesting, erosion/water/soil, continuous cover harvesting.
- Monetaring forest ecosystem services and biodiversity credits
- Predicting future labour needs for SSFOs– manual falling and harvesting skills likely to continue due to the small scale.
- Integrated land use between pastoral or arable farming and forestry involving greenhouse gas offsetting, whole farm planning and biodiversity credits.
- Wood supply certification for SSFOs and alternative species.

Risk management including climate change

The idea of this topic was about risk in terms of financial returns. However, it could equally apply to environmental and social outcomes enhancing or degrading ecosystem services,

changes in biodiversity, or gain or loss of carbon, positive or negative effects on the community, public licence to operate.

Risk factors which might affect economic return and therefore willingness to invest in forestry –

- Long term nature of forestry investment.
- Choice of species and management regime.
- Changes to cost of capital – interest rates
- Changes to land values.
- Availability or price of planting stock.
- Scientific research to improve tree genetics and understanding of many other aspects of forestry and wood processing.
- Changes in market values and demand for forest products, including transport costs, and international markets.
- Changes to the value of carbon - New Zealand Units.
- Highly volatile nature of export markets considering that many SSFOs will only experience one harvest cycle from their enterprise.
- Resilience to biological threats and new incursions of pest or disease
- Changes to abundance of pest animals.
- Changes in rules affecting afforestation such as government or local political issues.
- Changes in labour availability or costs for planting, silviculture or harvest,
- Technological advances which affect the ability to grow or process a crop.
- Changes to the Emissions Trading Scheme or biodiversity services accounting.
- Changes to tax rules such as the cost of bush.
- Changes to building codes and earthquake standards.
- Changes to timber treatment and preservation.
- Changes to requirements for environmental certification.
- Increased risk of fire or adverse weather such as floods, storms, wind throw and drought.

Risk factors which could affect environmental and social outcomes might be -

- Health and safety within the wider industry
- Weather related extreme events, compounded by climate change including fire, storm, droughts, floods and landslides.
- Adverse downstream effects on communities after floods
- Resilience of cultivated species to withstand changing climate or new biological challenges.
- Changes to environmental regulations including management of biodiversity within or nearby plantation forests.
- Changes to forest management regimes such as the ability to clear fell an entire catchment area and rules around permanent forests.
- Improved harvest technology with reduced effects on soil, water, threatened species. Possibly including airship assisted harvest, small coupe harvest, target diameter harvesting, continuous cover harvesting, proportion of harvested catchment and steep land harvest techniques.
- Increased use of wood waste or alternative products harvested from forests.

- Ability to monetarise ecosystem services, biodiversity or carbon sequestration.
- Biological incursions.
- Spread of wildings.
- Dynamics of New Zealand rare and threatened species
- How forest management practices affect those offsite or those downstream – debris versus improved soil and water.
- Development of forestry cooperatives or amalgamation of cutting rights.
- Forestry related businesses vertically integrated with local communities.

Indirect information obtained about learning needs

We compiled indirect information from attendees at Mystery Creek and farmers attending a series of Te Uru Rakau - NZ Forest Service extension workshops run by the NZFFA for basic information about trees on farms.

The main areas of questions covered the following.

Mystery Creek National Fielddays

- Alternative species.
 - In addition to queries about pine, many of those attending Mystery Creek also expressed interest in cypress, redwoods, willows, poplars, blackwoods and oaks.
- Tanes Tree Trust stand received lots of queries on totara and other native species afforestation.
- Other stalls tended to field questions about carbon farming or permanent forests.

Te Uru Rakau-NZ Forest Service workshops

- Alternative plantation species
- Emissions Trading Scheme
- Native tree afforestation

For people without extensive experience in tree growing or forestry, it might have been difficult for them to volunteer detailed information about their training need because they did not know enough to ask themselves the right questions. 'They don't know what they don't know'. By contrast, our on-line survey prompted responses for a range of topics in business, practical skills and regulatory compliance.

How on-line resources were summarised and tabulated.

A major part of the scope of this project was to identify on-line material and short courses which are relevant to the needs of SSFOs. Most of the larger websites cater for their own in-house audience. These include Beef and Lamb, the dairy industry, NZ Forest Owners, Forest Growers Research, Scion, Forest Industry Contractors Association, Forest Industry Safety Council, Agmatters, Landcare, Worksafe, Tanes Tree Trust and the NZFFA. There are various forestry management companies who provide newsletter services and digital magazines such as *Friday Offcuts* and *NZ Logger* magazine.

A few websites are more generalised and so tend to provide introductory level information. An example is Canopy which provides basic information about forestry as well as useful links to articles with more detail that are hosted by other websites. The links to additional information are by no means complete.

Sites such as Discover Forestry are geared to younger students and their teachers. There are similar websites based on forestry in Australia and elsewhere, but generally do not offer SSFOs the level of knowledge or skills to manage their businesses.

The website information was to be scored for relevance, currency, and grade such as basic, intermediate, or advanced.

We decided to limit our database to the more significant sites that we could find.

In the case of the NZFFA, not all the information is available to the public, but the benefits of joining the NZFFA obviously include access to more information and to meet with others who share a similar interest.

It is difficult to display complicated listings in table form which are searchable. If this document is accessed electronically, e-links are provided to rapidly access websites and investigate for more information.

The NZFFA website contains so much information, over 8,000 pages, that rather than try to present summaries in table form, we have decided to write more general descriptions of contents with electronic links to pages and further drop-down menus. The NZFFA site is powered by a google search engine, but it helps to know what to search for.

On-line web-based resources

Table 2 lists selected forestry related Information available from New Zealand based websites and provides hyperlinks to the relevant web pages.

Table 2. Selected Forestry Related Information from New Zealand based websites

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currency | URL |
|---|---|---|----------|-------------------|-------------------|--|
| New Zealand Agricultural Greenhouse Gas Research Centre, Ag Matters | | | | | | |
| Actions: Practices and technology for reducing on-farm greenhouse gas emissions. | General practices and technology for reducing on-farm greenhouse gas emissions. | | | high | 2023 | Actions Ag Matters |
| Web page, trees and vegetation | Good summary of use of trees for offsetting, links to other sites | Refers to rates of sequestration | | high | current 2023 | Planting trees Ag Matters |
| | | | | | | |
| Beef & Lamb site | | | | | | |
| Compendium of NZ Farm Facts 2022 | trends in sheep and beef, export values | Data is complimentary to FOA Facts and Figures | advanced | core | updated each year | Compendium-22.pdf (beeflambnz.com) |
| B&L Website learning modules | Knowledge Hub | general pages | | core | | Knowledge Hub Beef + Lamb New Zealand (beeflambnz.com) |
| Forestry and Farming: Productivity and profitability of the sheep & beef sector, emissions and carbon credits | video, paints B&L as more profitable than Plantation forestry alone, and blames carbon price for boosting land prices, wishes to exclude green carbon (food and | Video, presented by Rob Davison, Executive Director of Beef + Lamb New Zealand's Economic Service | advanced | core | 2019 | Forestry and Farming: Productivity and profitability of the sheep & beef sector, emissions and carbon credits Beef + Lamb New Zealand (beeflambnz.com) |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|--|---|--|----------|-------------------|-----------|--|
| | resulting methane cloud) from international obligations (claimed not to contribute to global warming) | | | | | |
| Carbon Sequestration | YouTube webinar, sets ground rules for ETS, HWK and offsetting, revegetation mostly about native species in Central Otago | B+LNZ Central Otago, Farming for Profit – | advanced | core | May-22 | B+LNZ Central Otago Farming for Profit – carbon sequestration Beef + Lamb New Zealand (beeflambnz.com) |
| Breakfeed: “Right tree, right place” with Stuart Orme, Forestry Consultant | Podcast; Right tree, right place, forestry, plants, native trees, trees, right tree right place, Stuart Orme | | basic | basic | 2020 | Breakfeed: “Right tree, right place” with Stuart Orme, Forestry Consultant Beef + Lamb New Zealand (beeflambnz.com) |
| Trees for the farm A decision support tool for farmers, Section A: on-farm establishment of poplar and willow trees, section B: why plant trees on farms? a cost-benefit evaluation | Trees for the Farm, A Decision Support Tool for farmers Ian McIvor senior scientist, Plant and Food | pdf booklet 2017, about poplars and willows on farms | advanced | core | 2017 | trees-farm.pdf (beeflambnz.com) |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|---|---|---|-------------------|-------------------|---|---|
| Trees within farms: opportunities with carbon. Enhance your farm's biodiversity | Description of ETS, indicative carbon stock lookup tables, opportunities and risks of ETS | B&L factsheet | | core | Mar 2022, but out of date for averaging | FS298-within-farms-opportunities-carbon (beeflambnz.com) |
| | | | | | | |
| Canopy | broad based website supporting getting started in forestry | | basic to advanced | core | continually updated | Discover the benefits of trees Canopy |
| | | | | | | |
| Forest Growers Research | large number of reports funded by commodity levy and others going back to 1970 | hard to search, have to be registered with FGR, but some content may be also accessed through NZFFA website | | | | » Documents (fgr.nz) |
| | | | | | | |
| Forest Owners Association Website | | | | | | |
| Links to FISC and Safetree | links to FISC and Safetree | | | | | Welcome to the Forest Owners Association (nzfoa.org.nz) |
| Research | research | | | | | |
| Careers in Forestry | careers in forestry | | | | | |
| Guidance for Rare Species | Guidance for rare species | | | | | |
| Resources for Biosecurity | resources for biosecurity | | | | | |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|--|--|-------------------|----------|-------------------|-----------|---|
| Commodity Levy | commodity levy | | | | | |
| Key statistics for planted forests | Key statistics for planted forests | | | | | |
| FOA Environmental fact sheets | | | | | | |
| Planted Forests and Carbon | Planted Forests and Carbon | | advanced | core | 2020 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/847-planted-forests-and-carbon/file |
| Forest Water Dynamics | Forest Water Dynamics | | advanced | core | 2020 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/846-forest-water-dynamics/file |
| Wood in streams | Wood in streams | | advanced | core | 2019 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/700-wood-in-streams/file |
| Biodiversity in Planted Forests | Biodiversity in Planted Forests | | advanced | core | 2019 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/637-biodiversity-fact-sheet/file |
| Response of stream ecosystem to debris flows | Response of stream ecosystem to debris flows | | advanced | core | | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/699-response-of-stream-ecosystem-to-debris-flows/file |
| Fertiliser use in Plantation Forests | Fertiliser use in Plantation Forests | | advanced | core | 2019 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/682-fertiliser-use-in-plantation-forests/file |
| Debris flows | Debris flows | | advanced | core | 2017 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/582-debris/file |
| Ecosystem Services | Ecosystem Services | | advanced | core | 2017 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/613-ecosystems/file |
| Radiata Pine Pollen | Radiata Pine Pollen | | advanced | core | 2017 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/615-pinepollen/file |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|---|------------------------------|---|----------|-------------------|-----------|---|
| Planted Forest Soils | Planted Forest Soils | | advanced | core | 2017 | https://nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets/614-soils/file |
| Forest Practise Guides | | | | | | |
| Forest Practise Guides, Earthworks | Earthworks | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Forest Practise Guides, Erosion and Sediment Control | Erosion and sediment control | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Forest Practise Guides, Crossings | Crossings | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Forest Practise Guides, Tracks | Tracks | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Forest Practice Guides, Vegetation to manage erosion | Vegetation to manage erosion | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Forest Practice Guides, Harvest Slash | Harvest Slash | multiple guides under each topic | advanced | core | 2020 | Forest Practice Guides • Documents Library: Forest Owners Association (nzfoa.org.nz) |
| Standards and Guidelines | | | | | | |
| FOA Standards and guidelines general | | | | | | Standards and Guidelines (nzfoa.org.nz) |
| Forest Fire Risk Management Guidelines | | | | | 2018 | file (nzfoa.org.nz) |
| Forest Health Surveillance scheme | | | | | 2004 | Microsoft Word - FHSS Members Mailout Aug 04[1] (nzfoa.org.nz) |
| National Industry Standard for Sustainable Plantation Forest Management | | | | | 2005 | Microsoft Word - NZFOA National Standard Nov 05 Final |
| New Zealand Environmental Code of Practice for Plantation Forestry | Ecop ver 1, (out of date) | Superseded by National Environmental Standard for Plantation Forestry | | | 2007 | Section A-E_A4.indd (nzfoa.org.nz) |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|--|---|---|-------|-------------------|--------------------|---|
| Eliminating drugs & alcohol from the workplace A Code of Practice for the New Zealand plantation forestry industry | | | | | last modified 2018 | file (nzfoa.org.nz) |
| Manaaki Whenua Landcare Research | | | | | | |
| Surveys of Rural Decision Makers | highest educational achievement of responders | broad brush insight to rural activities | | of interest | | Survey of Rural Decision Makers » Manaaki Whenua (landcareresearch.co.nz) |
| MPI/TUR-Forest service | | | | | | |
| PGP; Steepland Harvesting | steepland harvesting | in association with FGR | | | 2017 | Steepland Harvesting NZ Government (mpi.govt.nz) |
| PGP; Stump to Pump | converting forestry waste to liquid biofuels | | | | 2014 | Stump to Pump NZ Government (mpi.govt.nz) |
| MPI, getting started in Forestry | | lots of links to other resources | basic | core | 2023 | Getting started in forestry NZ Government (mpi.govt.nz) |
| MPI, getting started in Forestry | Forestry rules and regulations | | basic | core | 2023 | https://www.mpi.govt.nz/forestry/getting-started-forestry/forestry-rules-regulations/ |
| MPI, getting started in Forestry | What to think about before you plant forest | | basic | core | 2023 | https://www.mpi.govt.nz/forestry/getting-started-forestry/what-to-think-about-before-you-plant-forest/ |
| MPI, getting started in Forestry | Sources of advice | links to local council, NZFFA, NZIF | basic | core | 2023 | https://www.mpi.govt.nz/forestry/getting-started-forestry/get-advice-planting-trees/ |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|---|---|--|----------|-------------------|---------------------|--|
| National Environmental Standard Plantation Forestry | National Environmental Standard Plantation Forestry | includes various tools, wildings, fish spawning, Erosion susceptibility classification | advanced | core | 2023 | National Environmental Standards for Plantation Forestry NZ Government (mpi.govt.nz) |
| Safetree | | | | | | https://safetree.nz |
| Windthrow, best practise advice | storm damage, safety alert, Guidance, Rayonier | | advanced | of interest | 2023 | Storm-damaged-stands-Apr-2023-pdf-2.6mb.pdf (safetree.nz) |
| How to manage Forestry Risks | health and safety planning | | advanced | of interest | 2017 | Managing-risk-in-forestry_March-2017.pdf (safetree.nz) |
| Thinning to waste | Scion report, 2015, maximising incident learning opportunities | managing health and safety | advanced | of interest | 2015 | Thining-to-Waste-2015-Full-report.pdf (safetree.nz) |
| general safety alerts | | | advanced | of interest | current | safetree.nz/safety-alerts/ |
| Scion | | | | | | |
| General Publications area | Links to NZ Journal of Forestry Science and the Scion digital library | | advanced | of interest | continually updated | Scion - Science publications (scionresearch.com) |
| Digital library with search engine | FRI bulletins and Forest | | advanced | of interest | continually | Browse - Scion Digital Library (oclc.org) |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currentcy | URL |
|---|---|---|-------------------|-------------------|-----------|---|
| | Service publications | | | | updated | |
| | | | | | | |
| Sustainable Farming Fund Reports | extensive library of reports and status of funded projects | search engine and links to various projects funded over last 20 years | advanced | core | current | mpi.my.salesforce-sites.com/public |
| | | | | | | |
| Worksafe | | | | | | |
| Safety Alert: machine assisted tree falling | 1805WKS-9-industry-safety-alert-forestry-machine-assist-felling.pdf | alert | | | yes | Search WorkSafe |
| Safety Alert: Box Cuts | 1733WKS-9-industry-safety-alert-forestry-box-cuts.pdf | banned by Panpac in their forests | | | | Search WorkSafe |
| many other alerts with useful insights | | | | | | |
| | | | | | | |
| NZFFA Library | 8,000 pages of resource | see separate section in this document | basic to advanced | core | varies | NZ Farm Forestry - Library (nzffa.org.nz) |
| | | | | | | |
| Tanes Tree Trust | Extensive guides for native revegetation on farms, including with intention to harvest for timber | | advanced | core | varies | Tāne's Tree Trust • Native forests for our future (tanestrees.org.nz) |

| Title | Key words | Explanatory notes | Grade | Relevance to SSFO | Currency | URL |
|------------------|--|-------------------|----------|-------------------|----------|---|
| Resources | Native Forest Toolkits (calculators), Publications, Bulletins, Newsletters, Databases, Videos, tara publications & resources | | varies | of interest | varies | Resources • Tāne's Tree Trust (tanestrees.org.nz) |
| Publications | free download, lots of bulletins and handbooks | | varies | of interest | varies | Publications • Tāne's Tree Trust (tanestrees.org.nz) |
| Species profiles | 21 different native trees | | advanced | of interest | varies | Species profiles • Tāne's Tree Trust (tanestrees.org.nz) |

What is in Canopy

Canopy is a website by Te Uru Rākau – New Zealand Forest Service. This website has been created for support throughout a forest project and to help you make decisions at each stage.

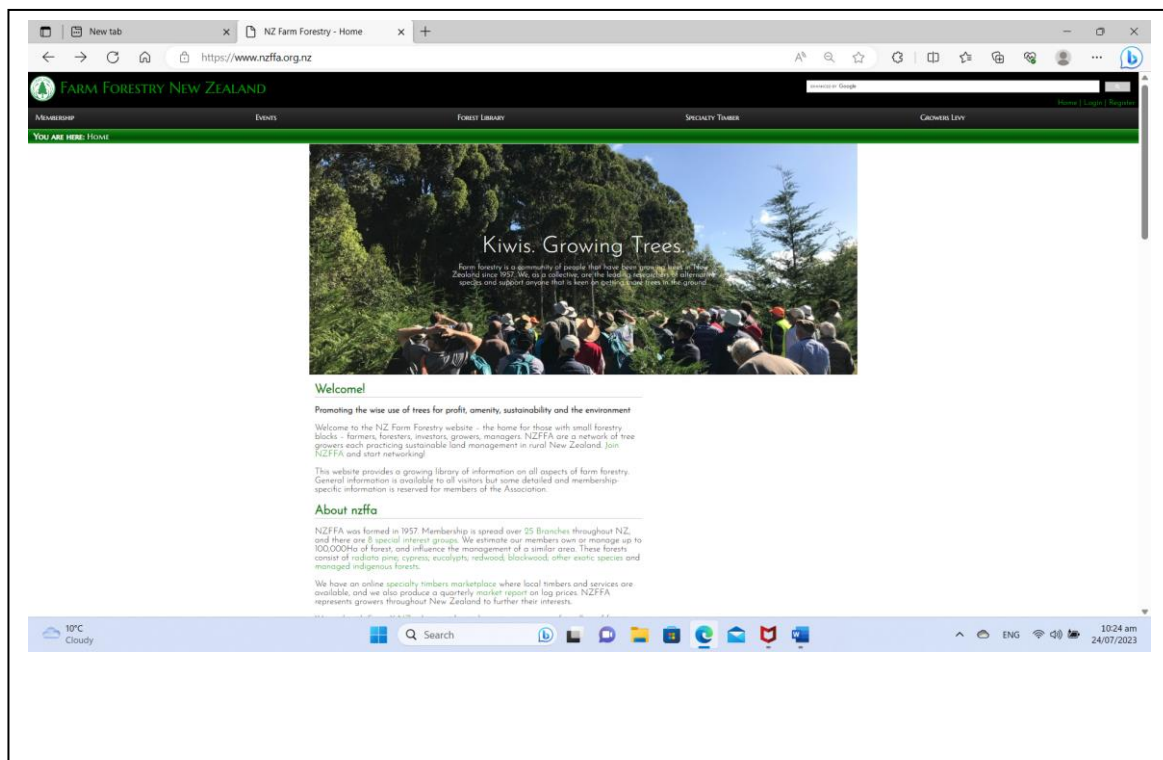
The website provides the information for these decisions and show where you need to go for more information.

It is a collaborative website. It works work with other government agencies, industry partners and those in the forestry sector to give you the information you need, or access to services from one place.

The site is user friendly and leads would-be forest growers through a series of steps from forest planning, establishment, managing, harvesting to marketing. Each stage has a short precis and links to further information. Some space is devoted to Ngahere Māori with links to other resources. Under the menu data and research there is a list of searchable topics and data including links to other websites.

What is in the NZFFA website

The NZFFA Website can be accessed through this hyperlink, [NZ Farm Forestry - Home \(nzffa.org.nz\)](https://www.nzffa.org.nz)



The tabs for Membership, Events, Forest Library, Specialty Timber and Growers Levy lead to a series of drop down menus.

The Membership Tab leads to Personal membership details, information for everyone, and a members' section which requires login to access. This includes full access to copies of *Tree Grower* magazine .

Membership

In this page:

- Personal**
 - Register or join
 - Manage subscription
 - Website help
 - Contact NZFFA
- For everyone**
 - Branches
 - Special Interest Groups
 - Blogs
 - President's Comment
 - Awards
 - Neil Barr Farm Forestry Foundation
 - Conference presentations
- For members**
 - Rules and guidelines
 - Contacts
 - Minutes and Reports
 - Farm Forestry Newsletters
 - Tree Grower magazine
 - NZFFA Archives
 - NZFFA Accessories & Clothing

Farm Forestry - Headlines

Article archive »

SNA REGULATIONS 'CONFUSING ECOLOGICAL NAIVETY'
 Thursday, July 06, 2023
 Forest Owners say the just released National Policy Statement on Indigenous Biodiversity (NPSIB) is a classic bureaucratic formula of confusing ecological naivety which will not help rare species and likely.

PRIMARY SECTOR LEADERSHIP NOT ADDRESSING ECONOMICS AS THE REAL CLIMATE CHANGE ISSUE
 Tuesday, July 04, 2023
 The immediate past president of the Farm Forestry Association (NZFFA) says the leaders of the primary sector and government are ineffectively tinkering with lowering greenhouse gas emissions. Graham West says the..

FOREST OWNERS HAIL 'BIOSECURITY HERO'
 Monday, May 22, 2023
 The Forest Owners Association and Scion want more people to report suspicious imported wood products which might be infested with introduced wood and forest pests. FOA Biosecurity Manager, Brendan Gould.

MINISTERIAL INQUIRY COULD HAVE WIDESPREAD IMPLICATIONS FOR TAIRAWHITI COMMUNITY
 Tuesday, May 16, 2023
 The New Zealand Institute of Forestry says the just announced Tairāwhiti land use inquiry is recommending measures which will stop the very activities which are vital for the region's recovery...

TAIRAWHITI LAND USE INQUIRY NOT ADDRESSING WIDER ISSUES
 Sunday, May 14, 2023
 The Forest Owners Association says the Ministerial Inquiry into landuse in Tairāwhiti has a core of practical recommendations - but have not addressed economic

Special Interest Groups

Special Interest Groups (sometimes known as "action groups") are nationwide groups of farm foresters with an interest in a forestry subject.

Acacia Melanoxylon Interest Group Organisation »

Acacia Melanoxylon Interest Group Organisation (AMIGO) bring together members interested in growing Tasmanian Blackwood - professional forest researchers, timber marketers and commercial users in an information sharing network aimed at creating a sustainable NZ resource of plantation grown quality hardwood.

Cypress Development Group »

The Cypress Development Group is an industry action group dedicated to commercialising cypress as a profitable plantation forest species in New Zealand. There is a huge amount of research work on cypress species, management and associated issues being undertaken by NZFFA members. The Cypress Development Group collates existing research and pools the experience and knowledge of farm foresters growing cypress.

Eucalypt Action Group »

Eucalypts have been a particular focus of farm foresters since the excellent days of our association over 150 years ago. The Eucalypt Action Group has a focus on eucalypts for hardwood solid timber and saw. We promote growing of eucalypts for the timber natural durability, strength and fire-resistance properties and desirable appearance. Eucalypt timber is suitable for on farm uses such as posts and rails along with structural applications such as exposed beams and decorative applications such as flooring and furniture.

Indigenous Forest Section »

It's Promote indigenous forestry (including timber production), and to manage these forests in an ecologically sustainable fashion so that they retain their unique characteristics for the benefit of future generations. Indigenous is the quarterly journal of the Indigenous Section of the NZFFA. The journal includes articles relating to all aspects of indigenous forestry such as sustainable management for recreation, biodiversity enhancement and wood production, as well as species management, shelter and canopy, establishment of native trees, and the restoration of degraded areas of native vegetation. Members of the Indigenous Forest Section receive Indigenous as part of their subscription.

Sequoia Action Group »

Now that the old growth redwood forests of western USA are no longer available as a source of this prized timber, attention is focusing on the very promising potential for sustainably plantation-grown redwood (Sequoia) in New Zealand.

Forestry Investment Action Group »

The Forest Investment Action group was formed to provide growers and investors advisory and information on redwood forestry continues to be profitable in New Zealand. The Forest Investment Action group meets regularly in Wellington.

Harvesting Action Group »

March 2019
 The Harvesting Action Group (HAG) is currently being set up to facilitate cost-efficient harvesting of small scale forests in New Zealand. You can join the Harvesting Action Group in our NZFFA subscription form. There is currently no cost to join HAG but we'll try and keep you informed anyway.

Oaks New Zealand »

Oaks New Zealand formed in June 2018 to encourage the planting and utilization of oak trees in New Zealand. Oak is an important timber species in the northern hemisphere and is a popular tree in New Zealand for well conservation. A number of hybrid poplars have been bred in New Zealand with improved growth and form, thus unlocking the timber potential for the species.

Poplar Action Group »

Promoting and supporting the growing, processing and marketing of poplar wood and poplar and willow-based chemical products.
 The poplar action group formed in April 2003 to encourage the planting and utilization of poplar trees in New Zealand. Poplar is an important timber species in the northern hemisphere and is a popular tree in New Zealand for well conservation. A number of hybrid poplars have been bred in New Zealand with improved growth and form, thus unlocking the timber potential for the species.

Tree Grower articles

- **Abnottia species foray into Northland - Could be dormant** (Access: NZFFA membership)
 Herald Tribune with Rachel New, February 2022
 This was another Vaughan Kesteven special. The remarkable memory took its outstanding swiftness from near Waiapu. Forest in the west all the way north to Tapanui. Could it be on its side.
- **Progress on cypress - South Island field days a great success** (Access: NZFFA membership)
 Rachel New, August 2020
- **Cypress species have the potential to become a major plantation timber in New Zealand** -

Each of the green menu headings leads to expanded headers. The public wanting to learn more about forestry topics will also find some information in Special Interest Groups and Blogs.

For example, the Cypress Development Group header gives access to Cypress Development Group reports, newsletter and research archives. [NZ Farm Forestry - Cypress Development Group \(nzffa.org.nz\)](http://nzffa.org.nz)

Cypress Development Group

The Cypress Development Group is an industry action group dedicated to commercialising cypress as a profitable plantation forest species in New Zealand. There is a huge amount of innovative work on cypress varieties, management and silvicultural regimes being undertaken by NZFFA members. The Cypress Development Group collates existing research and pools the experience and knowledge of farm foresters growing cypresses. [Join NZFFA »](#)

Secretary:
Rachel Rose
Spotty Dog Farm Ltd
358 Matarewa Valley Road
RD 12 Whanganui 4582
spottedogfarmh@icloud.com
[Secretary login](#)

[Cypress Development Group membership page »](#)

In this page:

- [CDG Reports](#)
- [CDG Newsletters](#)
- [Research Archives](#)

Cypress Development Group reports

- [Anlass cypress of Hamar](#)
September 2022 (Access unrestricted)
DRAFT TREE LOG LED SED HEART LED HEART SED LENGTH 1 A ...
- [Kaingaroa Cpt 246/5 and Cpt 179 cypress trials, November 2022](#)
Dean Satchell, Vaughan Kearns and Toby Stovold, March 2022 (Access: Cypress Development Group)
Cpt 246/5 Cypress clonal trials. We measured these the same day as the Cpt 179 cypress. All Cpt 246/5 cypress clones were planted the same year (2010/7). 1 Scion nootika hybrid trials...
- [Cypress hybrid selections 2021](#)
Dean Satchell, October 2021 (Access: unrestricted)
This report summarises observations from several trials (Taumaranui, Piawai, Kaingaroa Cpt 300, Cpt 1000, Tarawera Cpt 30, Silverwood and BalaHuia). Nootika hybrid selections Macrocarpa x Nooitika hybrid selections NM 308.
- [Progress with cypress clonal project](#)
August 2021 (Access: Cypress Development Group)
Report for Le Uru Rōkau, August 2021 Cypress Development Group of the NZ Farm Forestry Association Background Cypress species are well known in the rural landscape throughout New Zealand, planted...
- [2017 Clonal cypress trial, Silverwood, Central Canterbury](#)
Dean Satchell and Vaughan Kearns, August 2021 (Access: Cypress Development Group)
Planted September 2017 (Assessment 12/2022). This trial is two separate trials, both randomised single tree plot design (10 replicates in trial 1 and 9 replicates in trial 2), and is ...
- [2017 Clonal cypress trial, Tarawera Compartment 30](#)
Dean Satchell, Toby Stovold and Vaughan Kearns, June 2021 (Access: Cypress Development Group)
The Scion clonal hybrid cypress trial was planted in July 2017 in radiata pine cutovers, so was 3 2/3 years old at the time measurements were taken during March 2021...
- [2017 Clonal cypress trial, Compartment 1009, Kaingaroa RCP](#)

Participate in our cypress trials!

During 2023 the Cypress Development Group will be continuing with our cypress trials throughout New Zealand.

If you would like to participate please contact Vaughan Kearns (027 4457138)

FARM FORESTRY NEW ZEALAND

MEMBERSHIP | EVENTS | FOREST LIBRARY

MEMBERSHIP MENU ↓

YOU ARE HERE: HOME | MEMBERSHIP | SPECIAL INTEREST GROUPS | INDIGENOUS FOREST SECTION

See also:

- [Indigenous species - Species guides](#)
- [Indigenous species - Tree Grower articles](#)
- [Indigenous species - Blogs](#)
- [Report: Trees for steep slopes - Beech, Southern](#)
- [Report: Trees for steep slopes - Kauri](#)
- [Report: Trees for steep slopes - Totara](#)

Indigenous Forest Section

IFS Promotes indigenous forestry (including timber production), and to manage these forests in an ecologically sustainable fashion so that they retain their unique characteristics for the benefit of future generations. Indigena is the quarterly journal of the Indigenous Section of the NZFFA. The journal includes articles relating to all aspects of indigenous forestry such as sustainable management for conservation, biodiversity enhancement and wood production, as well as riparian management, shelter and amenity, establishment of native trees, and the restoration of degraded areas of native vegetation. Members of the Indigenous Forest Section receive Indigena as part of their subscription.

To join contact NZFFA or join online. Copies of Indigena are also available to non-members at \$10 per issue, \$40 for four issues, including postage. Contact John Warble, PO Box 40, Oxford, Canterbury. Make cheques payable to the Indigenous Forest Section NZFFA. Members can download back issues from the IFS members page.

Indigenous Forest Section members area»

In this page:

- [Reports](#)
- [Species information](#)
- [Other sources of information](#)

Reports

- [Report: Trees for steep slopes - Southern beech](#)
Dean Satchell, July 2018 (Access: unrestricted)
In this page: Management and silviculture Spring Silver beech Black beech and Mountain beech Red beech Hard beech Pests and diseases Timber A number of Southern beech species are indigenous.
- [Report: Trees for steep slopes - Kauri](#)
Dean Satchell, July 2018 (Access: unrestricted)
In this issue: Silvo Management and silviculture Pests and diseases Timber Kauri (Araucaria)

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<https://www.nzffa.org.nz/events/>

10°C Cloudy

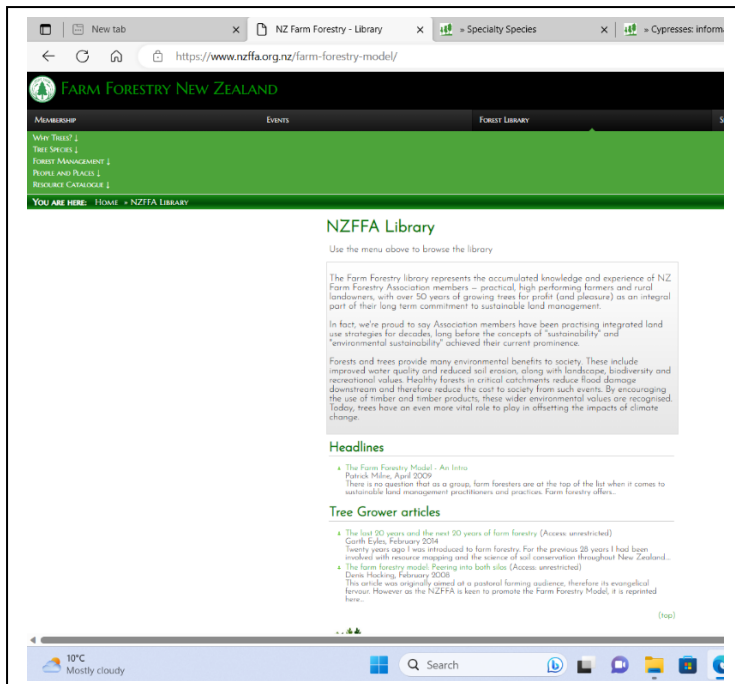
The blackwoods, eucalypts, indigenous and sequoia groups have detailed links to species information, research reports and other sources of information and bibliography.

Some of the special groups have hypertext to links on related topics.

Some additional information related to special stands and action group records is accessed via NZFFA archives under the For Members drop down menu.

[NZ Farm Forestry - Archive categories \(nzffa.org.nz\)](http://nzffa.org.nz)

Menus under Forest Library and Growers levy contain more information. The Growers Levy links to the Forest Growers Levy website [NZ Farm Forestry - Library \(nzffa.org.nz\)](https://www.nzffa.org.nz)



The Forest Library is an electronic manual on all aspects of forestry. [NZ Farm Forestry - Forest Management \(nzffa.org.nz\)](https://www.nzffa.org.nz)

The menu under Forest Library/Why Trees lists 13 different subsections, including trees for timber, shade, shelter, erosion control, riparian, fodder, biomass/energy, dairy farms, bees, carbon, show/amenity, ecosystem services, effluent treatment, and additional crops. Confusingly, the Trees for Timber/Timber species section lists 5 species (black walnut, manuka/kanuka, oak, paulownia and spruce) which are not mentioned in the higher level Timber Species

menu. [NZ Farm Forestry - Species \(nzffa.org.nz\)](https://www.nzffa.org.nz) The Timber Species menu is also part of a larger package within the Species Selection Tool [NZ Farm Forestry - Species selection tool \(nzffa.org.nz\)](https://www.nzffa.org.nz)

Forest Library/Tree Species [NZ Farm Forestry - Species \(nzffa.org.nz\)](https://www.nzffa.org.nz) has drop down menus in 11 categories – acacia, cedar, cypress, eucalypts, fir, larch, indigenous, poplar, pine, redwood and willow.

Each species in the guide has further information on site requirements, site preparation and planting, establishment and maintenance, Management and silviculture, Timber utilisation, Growth, yield, economics and carbon, and links to further reading.

Forest Library/Forest Management Tab menus are Emissions Trading; Forest Establishment and Maintenance; Forest Certification; Forest Health, Pests and Diseases; Forestry Cooperatives; Forest Soils; Health and Safety; Inventory and Decision Support Software; Investment, Legal and Insurance; Milling Drying and Marketing; Risk, Wind, Fire and Snow; Roads, Earthworks and Harvesting; Silviculture and Forest Management; Site Preparation and Planting; Weeds.

The Forest Library/People and Places [NZ Farm Forestry - People and Places \(nzffa.org.nz\)](https://www.nzffa.org.nz) menu links to Places to Visit, Case Studies and Award Winners.

The Forest Library/Resource Catalogue is a large menu giving access to:

- NZ *Tree Grower* magazine, all issues back to 2005. The public have limited access to content over the last three years.
- Videos (Tree on Farms, categorised by farm type and timber species, also Poplars and Willows series, a range of videos put together by the Poplar and Willow Research Trust and sponsored by Beef + Lamb New Zealand).

- Information Leaflets and guides going back to 2005, lots of basic 'How to' information, totara to tax to hardwood pruning and many more.
- Reports, technical project reports.
- Facts and Figures for NZ Plantation Forest Industry.
- Forest Practice Guides and Codes of Practise. Essential reading for anyone conducting a forestry business.
- Forestry and Grower Organisations. Needs updating. Does not include newer Maori and carbon forestry groups.
- Training and Education Providers. This section now out of date with Vocational Education Updates.
- Specialty Wood Products Partnership Reports, eight different subject areas covering many reports since 2015.
- Farm Forestry (History)- The First Fifty Years

There are various ways to extract information about tree species and how to grow them. A species tree Selection Tool, as a standalone tool can be found here: [NZ Farm Forestry - Species selection tool \(nzffa.org.nz\)](http://nzffa.org.nz)

Forest Practice Guidelines [NZ Farm Forestry - Forest Practice Guides \(nzffa.org.nz\)](http://nzffa.org.nz)

These guides describe forestry best practices and could be incorporated into forestry management plans or requests for resource consents.

The guides include some large company best practice documents and or operational specifications, council technical publications, the *New Zealand Forest Owners Road Engineering Manual* may be used to describe the management practices that will form part of any management plan.

Specialty Timber [Farm Forestry timbers - Specialty Timbers New Zealand - the timber marketplace \(nzffa.org.nz\)](#), is the Farm Forestry Timbers Society pages and has links to –

- A timbers marketplace
- Membership and newsletters
- More on timber species different information from that obtained under Forest Library)
- An information section covering sustainable forestry management, environmental certification, the NZ Building Code including alternative solutions, durability, harvesting, sawmilling, seasoning, processing and timber research.
- The End Uses covers the various wooden components used in buildings.
- Timber Grades cover specifications for all the common building components.
- A glossary of technical terms used for log handling and milling and finishing.

Growers Levy pages NZ Farm Forestry - Growers Levy ([nzffa.org.nz](#))

The drop-down menu headers are –

- Forest Growers Levy
 - information about levy rates and work programmes that the levy supports.
- Growing the Forest Story; Forest Call
 - links to Forest Call episodes on TV
- Forest Growers Research
 - News, Conferences,
 - Research Programmes and calculators
- Headlines
 - News publicity supported by FGLT.
- *Tree Grower* Articles
 - Articles connected to FGLT funded activities.

The Forest Growers Research pages contain the links to the many research programmes that have been funded since the start of the programmes. This information is listed under the following headers:

- Harvesting and logistic,
- Precision Silviculture Programme
- Specialty Species
- Tissue Culture Propagation
- Forest Heath, Extreme Fire
- Forest Management
- Small Projects Undertaken

- Licence to Operate and Calculators

There is a lot of detail buried in this, and all very interesting reading.

Short courses and seminars available

Various groups run seminars, conferences and short courses. A few seminars and conference proceedings have already been identified on the web, but obviously there will be new ones generated over time and some may be available online after the event such as Forest Growers Research conference papers. Other groups which organise relevant workshops include the Ministry for Primary Industries, land care groups, Tanes Tree Trust, Beef and Lamb and the NZFFA. Branch field days held by the NZFFA are mostly less formal, but you get a chance to network with like-minded people.

Gap analysis, areas considered to have insufficient or inadequate training material available.

Table 3. Topics with Insufficient Training Material Available

| Index | Theme | Possible Resource | Recommendation |
|-------|--|---|---|
| 1 | Risk management | A few articles in <i>Tree Grower</i> | Commission articles for <i>Tree Grower</i> |
| 2 | New Technology | Articles in <i>Tree Grower</i> | Needs exploration of what it might encompass over next 30 years |
| 3 | Carbon forestry, ins and outs | Articles in <i>Tree Grower</i> , goal posts keep moving as Emissions Trading Scheme evolves with government policy settings, Also, from papers prepared by the Parliamentary Commission for Environment | |
| 4 | More on permanent forestry opportunities. Harvesting options not well understood | Workshops being set up by Tanes Tree Trust | Commission articles for <i>Tree Grower</i> |
| 5 | Commentary on National Environmental Standards for Plantation Forestry, water and indigenous biodiversity. | <i>Tree Gower</i> , perhaps Environment Protection Agency website Some industry commentary can be biased | |
| 6 | Biodiversity and plantation forestry | Some material on NZ Forest Owners Association website, needs more opinion articles. Various submissions by the NZFFA executive to | Commission articles for <i>Tree Grower</i> |

| Index | Theme | Possible Resource | Recommendation |
|-------|---|---|--|
| | | Government on proposed policy changes | |
| 7 | Forestry and communities/land use mosaics | Chris Perley articles and blogs Maori forestry/community aspirations, Te Aho Maori | Commission Articles for <i>Tree Grower</i> |
| 8 | Forestry cooperatives, changes to tax rules, | <i>Tree Grower</i> articles | |
| 9 | More on Continuous Cover Forestry (also see permanent forestry above) | Tanes Tree Trust booklets and others. Videos of seminars on Close to Nature Forestry Business Models, Sept 2023 Continuous Cover Forestry | Commission Articles for <i>Tree Grower</i> |
| 10 | More on deciduous hardwoods (other than poplar, paulownia and oaks) | Not much NZ specific information | |
| 11 | Basics on discount cash flow analysis for forestry | University text books | Commission Articles for <i>Tree Grower</i> |
| 12 | Basic Forestry Theory | Textbook or diploma courses | NZFFA website update |
| 13 | Fire safety, fire planning and use of fire as a land management tool | A booklet available produced in association with FENZ is available. | NZFFA website update |
| 14 | Regional strategies for hardwood resources, small scale sawmilling etc. | <i>Tree Grower</i> , NZFFA Website | |
| 15 | Reasons for planting trees (other than investing for direct financial return or GHG offsetting) | Tanes Tree Trust, Land Care Surveys of Rural Decision Makers | Commission articles for <i>Tree Grower</i> |
| 16 | Structured course work suited to SSFO, akin to Bruce Treeby moderated Open Polytechnic course | Potentially hosted within NZFFA website as a lot of material already hosted there, or through commercial on-line learning facilitator. | Opportunity for NZFFA to do this at same time as updating webpages |

Potential Training Providers

Hazardous activities

Training for hazardous activities, especially in relation to chainsaw use, need to be provided by Competenz certified trainers and assessors. In many situations a formal recognition of achievement, such as an achieved unit standard, is desirable for health and safety reasons, Worksafe compliance or required as a prerequisite for further study. A combination of several unit standards can add up to micro credentials or broader qualifications. Several training organisations, both within Te Pūkenga (Polytechnics) and private providers can provide this training.

The Polytechnics tend to offer a mix of attending courses at the regional Polytechnic along with work-based learning. The latter is aimed at industry employees, not part-time or amateur foresters.

Private trainers (some listed below), can run short courses at a local level for the likes of the NZFFA or land user groups, and can be flexible in how the courses are presented.

- 1) **Competenz Te Pūkenga** offer a range of qualifications predominantly aimed at those intending to work full time in the industry. The attached link is to their Forestry Flyer [Forestry \(competenz.org.nz\)](https://competenz.org.nz). There are narrow scope micro-credentials available for planting, forestry environment, basic chainsaw use in both production and non-production forestry.
- 2) The relevant chainsaw modules, unit standards, are –
 - a) Maintain a chainsaw. Unit 43. Demonstrate knowledge of chainsaw units, sharpening and maintenance.
 - b) NZQA based chainsaw training Units 6916 and 6917, over one to three days depending on previous experience. Includes felling of trees up to 200 mm in diameter.
 - c) Tree Felling Courses. Units 17763 (theory) and 17766. Three to five days duration. NZQA assessment is only available to operators which have a proven track record of chainsaw use before attending the course. An alternative horticulture or arboriculture unit standard 17257 may be an alternative to 17766.
 - d) Felling Hazardous Trees Course Unit 28562 (non production). Has the prerequisite of 17766, and an expectation of advanced experience. Not offered to part timers. The theory module Unit 17763 tends to cover more advanced information than required, so may cover some of the knowledge and risk management required for hazardous trees.
- 3) Toi Ohomai at Rotorua offer an Introductory Chainsaw Skills (level 3) course. (Units 6916 and 6917). This involves three days of tutorials and 10 hours of off-site practical use recorded in a logbook. [Introductory Chainsaw Skills | Toi Ohomai Institute of Technology](#)
- 4) There are several private providers which could cater for small groups in the regions.
 - a) Forestry Training New Zealand offer a range of courses with or without NZQA registered unit standards. Be aware that certain advanced training modules such as Unit standard 28562, Felling dangerous trees, requires formal prerequisites of unit standard achievement. [Forestry Training | Forestry courses | Chainsaw safety course | Quad safety](#)

In addition to the Competenz Te Pūkenga unit standards listed in section 2 above, Forestry Training New Zealand offer short workplace chainsaw courses without formal unit standards.

Forestry Training New Zealand also offer safety courses on four-by-four, quad bike and light utility vehicle which can be NZQA assessed.

As of August 2023, Forestry Training New Zealand may offer courses in the North Island and as far south as Christchurch.

- b) Axiom Training offer on-site training for units 6916 and 6917. [Chainsaw Safety | Courses | NZQA | Axiom Training](#)
- c) Harris Training, mostly in South Island, offer a range of stand-alone unit standards and refresher courses as listed in part two above. The combination of unit standards can lead to a

New Zealand Certificate in Tree Felling & Clearing (non-production) [New Zealand Certificate in Tree Felling & Clearing \(non-production\) - Harris Training Services Ltd](#)

- d) Training Ventures Limited, deliver vehicle and machinery training courses NZ wide (with or without NZQA unit standards). [Training Ventures | Training Courses in Wairarapa and Northland](#)

- 5) The purpose of the New Zealand Certificate Tree Felling and Clearing is to provide people operating in roles outside of the forest industry – non-production – which involve felling and clearing trees, with the skills and knowledge required to carry out this work safely and effectively. Graduates of this qualification will be capable of planning and undertaking felling and clearing trees under limited supervision.

Graduates of this qualification will be able to –

- a) Use a chainsaw for basic operations and carry out basic maintenance.
- b) Safely fell a range of tree sizes, in a variety of conditions, using conventional felling cuts in a non-production situation.
- c) Plan and manage safe felling or clearing hazardous trees in a non-production tree felling situation.
- d) Graduates of this qualification will be able fell and clear trees as part of carrying out their primary role outside of the forest industry (non-production) and will be able to fell hazardous trees in addition to non-hazardous trees.

Please note. Harris Training Services requires the trainee of this qualification to be employed in a position that allows on job training and assessment. Trainees will be required to have access to a suitable training environment for the felling, clearing and hazardous tree aspect of the assessments this qualification includes – Upper South Island only.

Please enquire about signing up with Competenz to enrol on this training plan.

Components of the New Zealand Certificate in Tree Felling & Clearing (non-production) are as follows:

- Demonstrate basic chainsaw operation.
NZQA Unit Standard: 6917
Credits: 12 at level 2
- Maintain a chainsaw.
NZQA Unit Standard: 43
Credits: 10 at level 3
- Demonstrate knowledge of tree felling
NZQA Unit Standard: 17763
Credits: 5 at level 3
- Fell trees safely using a chainsaw.
NZQA Unit Standard: 17766
Credits: 15 at level 3
- Demonstrate knowledge of factors which affect the performance of forestry works.
NZQA Unit Standard: 22994
Credits: 10 at level 3
 - NZQA Unit Standard: 28562 Fell & clear hazardous trees- (Strand compulsory unit) For selected trainees only.

Training Providers in Non-Hazardous Areas

Generally, secondary schools, polytechnics, private training providers and universities do not offer suitable forestry related modules which are pitched to the needs of SSFOs in terms of level of complexity, course length and availability off campus. In these less hazardous activities – Practical silviculture and mensuration, business related and regulatory compliance, there is less need for certificates of achievement or a qualification, so these activities might be considered as out of scope for Te Pūkenga and Canterbury University

It therefore falls to organisations such as the NZFFA through branch field days or workshops, and on-line resources to fill the gaps.

Potentially short courses for the practical basics of planning, tree planting and silviculture could be run for land user groups, depending on demand.

Were course work and information to be provided for a fee, those carrying out the work may need to be registered and approved as forestry consultants.

The non-practical components of running a forestry business are mostly available on-line, but not in a systematic way.

Bruce Treeby of the Open Polytechnic used to offer non-qualification courses in Farm Forestry and Tree Cropping. These provided moderator feedback and were popular in the early 1990s. No such courses are presently available in New Zealand. Because they are not qualification oriented or industry endorsed by the Food and Fibre Workforce Development Council, it is unlikely that the Tertiary Education Commission would help with funding.

Recommendations

After carrying out our surveys, the NZFFA still considers that SSFOs need access to technical and operational information in sufficient detail to support their business decision making. That level of information is usually less than would be supplied for Level 5 Diploma or degree course content. What the NZFFA is advocating is for a series of short modules with self-directed learning that can be obtained on-line, but do not result in formal qualifications.

There is also a clear need for more basic information for those new to managing trees on farms. The Canopy website is good at providing that basic information. Some of this information could also be from workshops or seminars and with on-line videos.

Manual skills training for hazardous activities, such as chainsaw use, high pruning, tree felling and land clearance or felling difficult trees, obviously need practical sessions run by qualified tutors. Individual unit standards or micro credentials are available for chainsaw work.

Recommendations are as follows:

- That more specialist information from the NZFFA website be made accessible from Canopy, a perceived unbiased provider.
- That the NZFFA website be made more accessible for information and resources allocated to keep it more up to date and more user friendly.
- Table 1 lists broad themes in order of preference. Of those, new technology and risk management are the main areas with a deficit of information.
- Table 3 list a more detailed Gap Analysis where we believe that insufficient training material is available.
- That practical training for safe use of chainsaws be promoted for all rural land users.

- In particular, to teach aspects of risk assessment and knowing when one's own skills and equipment are inadequate for the task.
- There is an opportunity to create a structured non-qualification 'SSFO woodlot training course' similar to one that used to operate from the Open Polytechnic in the 1990s. Financial assistance for a technical writer and moderator would be required.

Output

The agreed output for this scoping exercise was a written report with recommendations for future training material and suggested providers.

Future Funding Strategies

- A plan outlining future work should first be approved by stakeholders.
- The plan needs to be consistent with the Forestry Industry Transformation Plan.
- That plan might consider which rural sectors stand to benefit the most from improved uses of trees on farms and erosion prone land.
- The plan should include consideration of training needs for Maori Forestry groups.

Potentially Forest Growers Levy Trust funds could fund further work, but levy funds are invariably oversubscribed. Alternatively, Te Uru Rakau – NZ Forest Service might pick up some of this as part of their extension services or the memorandum of understanding with the NZFFA. The WIDE trust or Neil Barr Fund might be other funding options.

Performance

Under new requirements for reporting Forest Growers Levy Trust projects, statements of performance need to be included in the report. Performance measures cannot always be presented within the timeframe for reporting, as often the effects become apparent later. However, some selected measures of performance are listed below.

- Feedback from the groups intended to benefit, such as comments from the survey
 - Most of those surveyed appreciated that we were asking about their training needs. There were a couple of minor criticisms about survey design and one individual who queried the need for a survey at all, because in his experience, all tree growers used professional advisors.
 - Clearly among those surveyed, both professional foresters and newbies alike appreciate access to updated and ongoing technical and opinion articles in the media and on websites.
- Information gained and in user hands.
 - A report has been prepared and will be distributed to the Training and Careers Committee, Forest Growers Levy Trust, and the Ministry for Primary Industries Te Uru Rakau - Forest Service. A summary will be made available in the *Tree Grower*.
- Stakeholder approval and criticism
 - The Training and Careers Committee have been given a copy of the power point summary of the main survey, but will not receive the main report until the end of this year 2023
 - One of the Ministry for Primary Industries staff was very keen to facilitate this project but she moved to a new role and continuity was lost.

- That some of the opportunities to improve training material and method of delivery are carried out. This cannot be quantified within the time boundary of this project.
- Training uptake is expected to improve health and safety for the small-scale forestry sector, and to raise their environmental and financial performance as envisaged by the *Forestry Roadmap to 2050*. These effects cannot be quantified within the time boundaries of this project.

Appendix 1; Results of a 2015 Survey as Published in *NZ Tree Grower* May 2017

Survey of the needs of small-scale forest owners for information and decision support

Graham West and Dean Satchell, *New Zealand Tree Grower* May 2017.

New Zealand has approximately 14,000 small-scale forest owners – those who own less than 1,000 hectares. Apart from the 1,900 or so NZFFA members who are included, this large group has little or no involvement with traditional information sources such as *Tree Grower*, field days, conferences, and research and development workshops. This group also represents about 25 per cent of the plantation forest area and control approximately 90 per cent of the pending rapid increase in wood availability of approximately 10 million cubic metres a year known as the ‘wall of wood’ comprising much of the afforestation boom of the mid-1990s. The group is also about to encounter the forest levy at harvest time and vote on the continuation of the scheme in 2019.

This large group of small-scale owners is likely to influence the general public’s perception of forestry as a private investment. It will therefore affect the aspiration for an expanded planting programme to achieve the economic and environmental aims espoused by central and local government.

A working group formed by NZFFA, the Ministry for Primary Industries, the School of Forestry, NZX Agri, private consultants and Scion has been active in collating information and developing action to achieve greater involvement of small-scale owners. In November 2015 the working group developed a survey to find out what the information needs of this group were, what they needed and what information channels worked best.

The survey was sent out to 3,000 small-scale owners by email and 364 responded in the following month. This article reports the results of that survey.

The first question in the survey asked what type of investor they were. The results in the table show the biggest group were farmers, next were foresters, and then lifestylers. Surprisingly, 64 per cent did not call themselves farmers but could be farmers who chose ‘family business’ or ‘partnership’ as a response. Respondents could nominate several categories in their answers. Each table shows the percentage in each category of the total responses given.

| Investor type | Per cent |
|-----------------|----------|
| Farmer | 35.7 |
| Forester | 25.5 |
| Lifestyle | 18.8 |
| Family business | 15.8 |
| Partnership | 13.6 |

| Investor type | Per cent |
|---|----------|
| Private company | 11.6 |
| Individual investor | 8.9 |
| Joint venture | 6.9 |
| Trust | 5.5 |
| Trustee company | 4.4 |
| Other | 2.2 |
| Council | 0.6 |
| Maori incorporation | 0.3 |
| Types of investors in small forest | |

The next question asked about the purpose of the forest investment. The results in the table below show that investment diversification was a key reason for forestry investment. This was well ahead of best land use and superannuation.

| Type | Per cent |
|-------------------------------------|----------|
| Investment diversification | 54.6 |
| Best land use | 43.5 |
| Superannuation | 37.3 |
| Environmental protection | 25.9 |
| Aesthetics | 17.8 |
| Legacy or farm succession | 17.0 |
| Recreation and lifestyle | 16.4 |
| Other | 6.4 |
| Understorey crops and wildlife | 5.6 |
| Purpose of forest investment | |

The next question asked was about the size of the plantation. The results show that most woodlots were in the 11 to 40 hectare size class, next was zero to 10 hectares, followed by 41 to 100 hectares.

| Size in hectares | Per cent |
|---------------------|----------|
| 0 to 10 | 28.0 |
| 11 to 40 | 39.3 |
| 41 to 100 | 14.7 |
| 101 to 500 | 13.9 |
| 501 to 1000 | 1.9 |
| Other | 2.2 |
| Woodlot size | |

Before asking about information needs, we next asked if they thought they had all the information required to manage their forests. Surprisingly, 54 per cent said yes and therefore did not need to fill in the rest of the questionnaire. In hindsight, this was a mistake but we did ask why they said yes. In reply, 79 per cent said they were already sufficiently informed, and 13 per cent said they do not personally manage the forest investment so do not require information.

For the 166 respondents who had answered that they did not have all the information they needed, we next asked – What are your information needs? The next table shows that information on harvesting, markets and marketing are the main areas of need. Maximising forest growth and tending are in the mid-range, with species and site selection, environmental compliance and land use planning least selected. Again, multiple options could be chosen.

| Need | Per cent |
|---|----------|
| Harvesting options and issues | 62.0 |
| Links to reputable wood buyers and harvesting contractors | 57.8 |
| Market information and price trends | 54.2 |
| Methods of marketing woodlots | 51.2 |
| Getting harvest ready | 50.0 |
| Links to harvesting and marketing advisors | 45.2 |
| Maximising forest growth and income | 44.0 |

| Need | Per cent |
|---|----------|
| Trading of carbon | 42.8 |
| General forest management | 39.2 |
| Establishment and re-establishment of plantations | 37.3 |
| Roading requirements and costs | 37.3 |
| Tending - pruning and thinning | 36.1 |
| Species and site selection | 30.1 |
| Environmental compliance | 30.1 |
| Strategic land use planning | 17.5 |
| Information needs | |

Next, we asked about information channels and how this information best provided. Results in the table on the next page show their preferences and each information channel was rated by its perceived usefulness. If we combine the 'very useful' and 'useful' categories we see a clear preference for workshops, seminars, web pages and field days. Web learning and journal articles are also favoured. Surprisingly, rural newspapers and brochures are some of the least preferred of the options suggested. Marae visits are probably low because of the ethnicity of the survey population.

| Rating | Rural newspaper | Brochures | Science reports | Popular journal | Consultants | Web e-learning | Video | Field days | Workshops and | Marae visits | Website pages |
|------------------------|-----------------|-----------|-----------------|-----------------|-------------|----------------|-------|------------|---------------|--------------|---------------|
| Very useful | 4.4% | 5.4% | 11.4% | 10.5% | 11.6% | 19.3% | 10.1% | 21.4% | 24.8% | 3.1% | 27.7% |
| Useful | 24.7% | 27.0% | 34.2% | 41.2% | 36.3% | 37.9% | 29.0% | 41.6% | 39.9% | 5.5% | 36.8% |
| Average usefulness | 22.8% | 27.7% | 29.5% | 27.5% | 21.9% | 20.0% | 28.3% | 16.9% | 17.0% | 11.8% | 25.2% |
| Slightly useful | 26.6% | 27.7% | 20.1% | 14.4% | 21.2% | 13.1% | 19.6% | 11.7% | 13.1% | 26.8% | 6.5% |
| Not useful | 21.5% | 12.2% | 4.7% | 6.5% | 8.9% | 9.7% | 13.0% | 8.4% | 5.2% | 52.8% | 3.9% |
| Very useful and useful | 29.1% | 32.4% | 45.6% | 51.7% | 47.9% | 57.2% | 39.1% | 63.0% | 64.7% | 8.6% | 64.5% |

Preferred information channels

Our next set of questions considered computer-based decision support. There have been several over the years and we wanted to know if they were still considered useful. The response to the question – Do you think software tools to be useful? was 79 per cent yes. This clearly indicates that small-scale forest owners have found a need for software help.

We next asked what computer-based analysis methods would they like. Results show that those to assist with assessing woodlot value and time to harvest were in the top five. Land use options were mid-range, with scheduling, tending and soils analysis least preferred.

| Value of software tool | Per cent |
|--|----------|
| Assess your woodlot for area and volume | 70.2 |
| When to sell my woodlot | 67.2 |
| Assess your woodlot's current value | 65.6 |
| Log price forecasts | 64.1 |
| Estimate roading and harvesting costs | 60.3 |
| Profitability of land use options – decision support | 38.2 |
| Historic log price trends | 36.6 |
| Record system suitable for forest certification | 33.6 |
| Schedule your tending operations | 29.0 |
| Soil nutrient analysis for growth projections | 23.7 |
| Other | 8.4 |

Conclusions and discussion

The main conclusions from this survey were that small-scale forest owners cannot be characterised easily, with the majority not calling themselves farmers. There is a range of reasons given for investing in small forests but the major identified diversification indicating they had other investments as well. Generally, small-scale forest owners can be characterised as having plantations which are often less than 40 hectares and have invested for a variety of reasons which are different from corporates. In other words, diversification, best land use and superannuation.

Their major information interests are strongly focused on harvesting and marketing and not so much around growing and tending. This may be due to the type of person prepared to respond to the questionnaire – due to harvest – and may fit with the demographic that these people own 90 per cent of the imminent 'wall of wood'.

Generally, they like to get information via the web, and showed interest in e-learning from web tutorials and the like, but also favour human interaction to get information from field days and seminars. Most thought software tools were useful. These two results show the small-scale forest owners are quite computer literate and progressive. The methods they prefer are again related to the harvesting and marketing stage of their forest investment and perhaps, because they did not strongly favour information from consultants, would like to be able to evaluate options themselves.

Further analysis is planned to explore the interconnections between respondent type and the answers given with more formal publication and review. In addition, there were about 100 comments made in addition to answering the questions, this requires further condensing and reporting.

This survey has been invaluable in terms of giving insights to the somewhat large group of anonymous forest investors. We recommend the survey be re-run and an attempt to get a larger group of respondents who are not self-selecting to provide validation and new insights.

We thank all the small-scale forest owners who took the time to respond to this survey. Their opinions are important and may be influential in the future of the forest industry.

Appendix 2; The Questionnaire Used for the 2023 Survey.

Purpose of survey

We want to get a better understanding of the learning and training needs of small forest owners, those land owners with less than approximately 1000 hectares forestry including pastoral farmers and small blocks with woodlots, shelter belts and riparian planting. The survey takes about five minutes to complete. This is a voluntary survey, but we really encourage you to participate.

Outcome

By collecting this information, we hope to develop future learning and training options to help you in your forest operations.

Your responses and any associated personal details collected will only be used for the purposes of this survey and will remain confidential. We will use overall results and no individual response will be identified in analysis. Thank you for participating in our survey.

General Information:

Your Details:

1. Name (optional) _____
2. Age range (please circle): *less than 30, 31-40, 41-60, 61-80, 81+*
3. Role within forestry or farming entity (please circle all that apply): *Owner, Manager, Family beneficiary, Shareholder, Employee, Other (specify)*

4. Type of forest that you or your business entity work with (please circle all that apply).
 - a. *Production woodlot, Permanent Forest Sink (partial harvest), Permanent Carbon Forest, Native reforestation not registered for carbon, Intend to, or have planted trees to offset farm livestock GHG emissions, Other (specify)* _____
5. Region _____
6. Estimated hectares of planted forestry controlled by you or your business entity, including shelter belts and riparian planting. (Rate single row shelterbelts as 1km = 1ha)

7. Are you or your business entity affiliated to any of these forestry related organisations (please circle all that apply): *NZFFA, Ngā pou ā Tāne, NZIF, Syndicate, Tanes Tree Trust, None, Other (Please specify)*

8. How would you rate your experience and knowledge in forestry? Please circle. *Low, Medium, High*
9. Do you or your business entity currently use the services of a registered Forestry Consultant or professional forest manager to guide your operations (please circle): *Yes / No*
If yes, at what stages do you seek advice (please circle all that apply)? *Planning, Establishment, Silviculture, Harvesting, Marketing, Health & Safety, Environmental and consents, ETS (carbon), Other (please specify)* _____
10. Do you (or influential member of the business entity) already have formal forestry qualifications? (Please circle) *Yes / No*. **If yes**, please specify the qualifications:

11. How do you keep up to date with industry developments, best practice in forestry etc?: (please specify sources) _____
12. Are you intending to plant trees in the next 12 or 24 months? (circle one) *Yes / No*
If yes, what reason are you predominantly intending to plant for (tick any box as appropriate to you)?
Erosion control Water quality/riparian protection Greenhouse gas offsetting/carbon sequest. Timber crop Animal welfare Amenity/enjoyment

Other Please specify _____

Understanding Your Training/Learning Needs:

13. Tick the boxes you would like to learn more about. Place two ticks in the boxes that are a priority for you.

Practical skills:

- | | | | |
|--|--------------------------|--------------------------------------|--------------------------|
| Chainsaw use including thinning to waste | <input type="checkbox"/> | Felling difficult or hazardous trees | <input type="checkbox"/> |
| Small Scale Harvesting | <input type="checkbox"/> | Fire safety and prevention | <input type="checkbox"/> |
| Silviculture: Tree planting, pruning, thinning | <input type="checkbox"/> | | |
| Mensuration (measures of forest productivity) | <input type="checkbox"/> | | |
| None of the above | <input type="checkbox"/> | Other (please specify) _____ | <input type="checkbox"/> |

Forestry Business:

- | | | | |
|---|--------------------------|---------------------------------------|--------------------------|
| What species to plant and their pros and cons | <input type="checkbox"/> | Risk management incl. climate change | <input type="checkbox"/> |
| Grants and subsidies available for planting | <input type="checkbox"/> | New Technology | <input type="checkbox"/> |
| Forest Management regimes | <input type="checkbox"/> | Forestry costs | <input type="checkbox"/> |
| Harvesting and marketing | <input type="checkbox"/> | Whole farm planning – including trees | <input type="checkbox"/> |
| Contract Management | <input type="checkbox"/> | None of the above | <input type="checkbox"/> |
| Other (please specify) _____ | <input type="checkbox"/> | | |

Regulations:

- | | | | |
|---|--------------------------|-------------------|--------------------------|
| Understanding the ETS and/ or He Waka Eka Noa-Primary Sector Climate Action Partnership | <input type="checkbox"/> | | |
| Environmental regulations e.g. (NES-Plantation Forestry, National Policy statements on-biodiversity or Fresh Water) | <input type="checkbox"/> | | |
| Sustainable forestry certification | <input type="checkbox"/> | | |
| Health and safety (as employer and as self-employed) | <input type="checkbox"/> | None of the above | <input type="checkbox"/> |
| Other (Please specify) _____ | <input type="checkbox"/> | | |

Training/learning Types and Mode of Delivery to Address Your Needs

14. If you identified any of the above training/learning needs, how would you like to learn this skill/information?: Please tick the options that would suit you and place two ticks in your most preferred option.

- Self-paced reading material/modules online
- Local workshops/Field events/short practical course
- If so, what days suit? Weekday Weeknight Weekend
- What length preferred.?
 - Couple of hours Half day Full day 2-3 days More than 3 days
- Mix of practical training and self-paced reading
- Online forums
- As part of a group you go to already e.g., discussion group (If so, specify) _____
- Connecting with others in your area who have done similar
- Other (please specify) _____

Is it important that you get a: Certificate The knowledge only Certificate and knowledge

Any further comment you may have

15. Do you have any other comments that will help us identify your learning and training needs?

16. Are you able to be contacted should we wish to discuss your requirements in more detail? Yes /
No

If yes, please supply Email and/or phone number for any follow up communication.

Name: _____

Phone: _____

Email: _____

Thank you very much for completing this survey. Please place finished survey form in the box at the NZFFA stand.

Appendix 3; Results summary for 2023 survey as PDF of slide summary – Page 48