



GROWING NEW ZEALAND

Native nurseries survey insights

The first national survey of the native plant nursery industry shows it has enough capacity to increase native tree production, but long lead times mean achieving this growth will require planning and co-operation.

INTRODUCING OUR INDUSTRY

New Zealand’s plant production (nursery) industry is worth an estimated \$500 million per year and employs approximately 4000 people.

Nurseries are distributed throughout the country, from Northland to Stewart Island, with 66% in the North Island. Our industry provides skilled jobs and career opportunities spread across all regions. Regional councils lead the way in training and qualifications with more than 66% of staff qualified at level 5 or higher.

Traditionally nurseries operated as vertically integrated businesses, but the survey shows a major shift in technology is driving specialisation. Increasingly, a small number of specialist businesses are producing ‘growing-on lines’, small starter seedlings sold to other nurseries to grow to a size suitable for planting.

This supply-chain approach is improving utilisation of existing capacity and will be a key factor in enabling the industry to achieve the scale needed to meet future demand.

The data of business size show a consolidated sector, with 66% being small operations (less than 2ha). Large producers (10ha or more) make up 5.3% of the businesses and produce more than 50% of the plants.

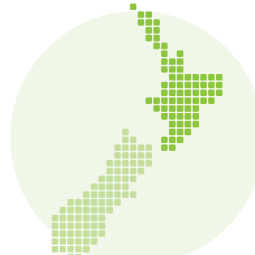
This survey was commissioned by Te Uru Rākau through its Partnership Fund. The research includes all native plant nurseries (commercial, non-profit, government, councils, Iwi). It excludes nurseries that do not produce any native plants.



NZ Plant Production nursery industry worth is **\$500 million**



NZ Plant Production nursery industry employs approx **4000 people**



Nurseries are distributed throughout the country with **66% in the North Island**

SURVEY METHOD & OVERVIEW

This is the first national survey of the native plant nursery industry.

An email survey was sent to 359 native plant nurseries in September and October 2019 to gather the initial quantitative data. We asked 29 questions about the size, capacity, and operations of New Zealand’s native plant growing nurseries. Follow-up interviews gathered qualitative data and allowed respondents to add depth beyond the online responses. The response rate is a very credible 43% with 156 respondents completing the survey. 32 respondents completed the entire survey, 99 partially completed, and 25 respondents did not produce native plants in the past two years. Results were adjusted before analysis to allow for non-responses.

Responding nurseries were grouped into three sizes: small (<2ha); medium (2-10ha) and large (>10ha). Nurseries were asked about their output and projections by financial years – this period varies from business to business.

Most commercial nurseries were captured, but community and not-for-profit nurseries may have been missed, especially if they don’t have a website or easily-found email and contact addresses.

The survey was designed, run and analysed by Harmonic Analytics. Data were collected from commercial and non-commercial nurseries. Responses were taken in good faith. Due process has been followed, but researchers did not endeavour to validate or otherwise corroborate the responses. NZ Plant Producers and Harmonic Analytics make no guarantee of the accuracy or completeness of the responses, and do not accept any liability for any errors.

Figure 1
Size of Nurseries

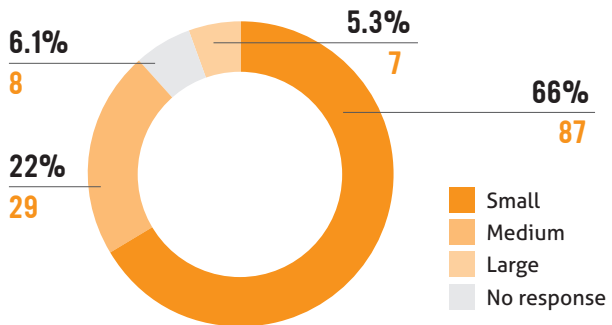


Figure 2
Plant Production

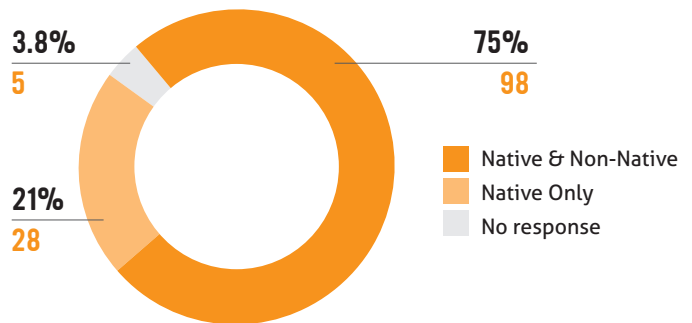
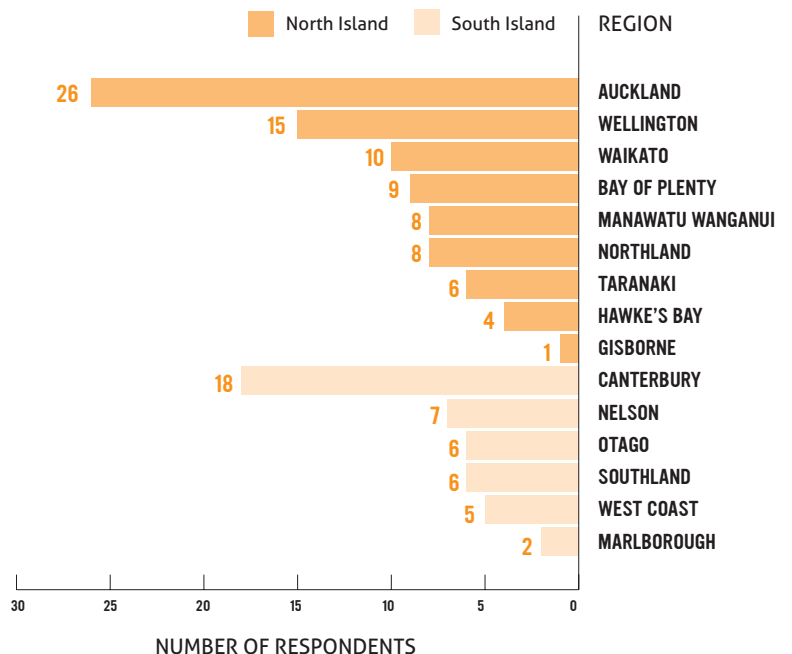


Figure 3
Location of Respondents



SURVEY RESULTS

New Zealand nurseries produced almost 40 million native plant seedlings last year. Native trees eligible for the One Billion Tree programme (1BT) made up 27% of this production, or 10.6 million trees.

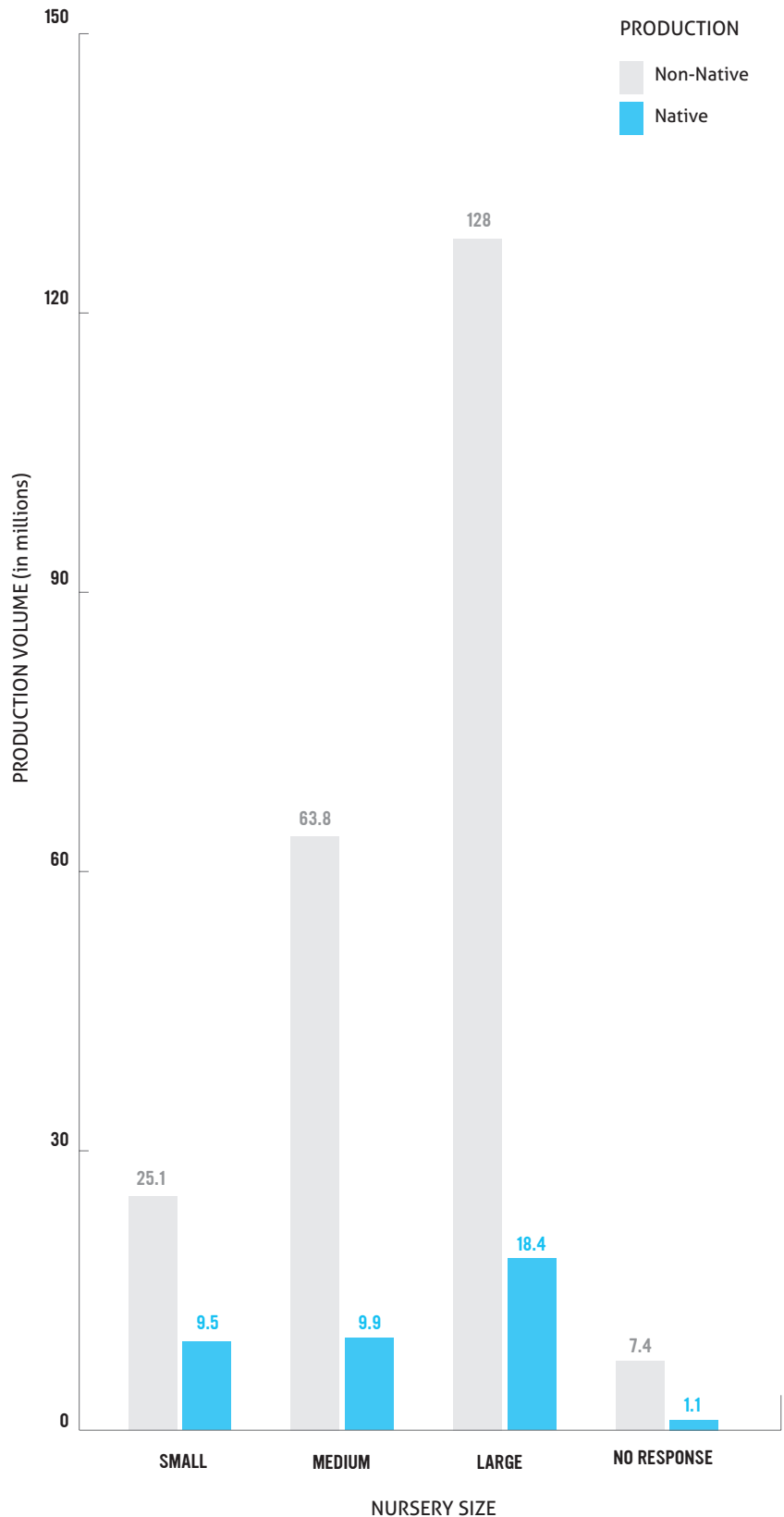
Industry data, supported by interview responses, indicate the native nursery industry has grown at 12%-15% per year over the past three years. Our assessment of primary sectors indicates this rate of growth is not sustainable indefinitely without affecting debt, profitability, and skilled labour supply.

Only a small proportion of this new production has been committed to trees, with the majority of new production being in grasses, flaxes, and shrubs. This mix is expected to continue, as demand for non-tree species is driven by riparian and revegetation planting (especially for major roading projects). We do not believe the demand for non-tree species will decrease to enable increased production of native trees.

New entrants to the industry tend to be small operators. Their contribution to total native plant production is small, with the increase in production generally coming from growth of established large business. However, small and medium nurseries devote a greater proportion of their production to trees, so any strategy to increase native tree production must include small and medium nurseries and recognise their specialisation and expertise.

Figure 4

Estimated Production Volume (in millions) Last Financial Year
Volume broken down by Native & Non-Native production

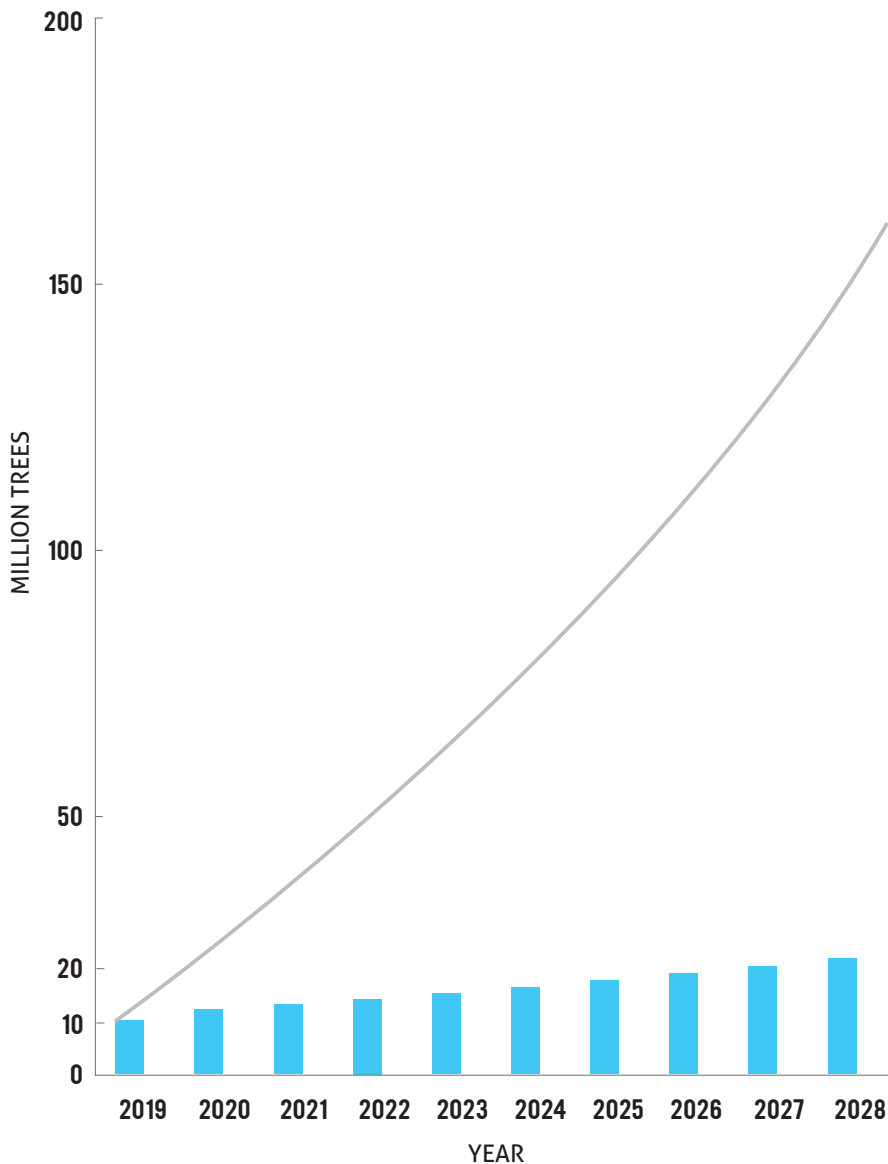


Projected Growth

Figure 5

Native tree production projections

■ Annual Production — Running Total



The survey shows the industry produced slightly more than 10 million native tree seedlings in the previous financial year (~2018). Previous growth phases in specialised horticulture sectors suggest the nursery industry can realistically achieve sustainable year-on-year growth at about 7.5%pa – greater growth is possible but less sustainable. The survey also shows existing spare capacity of about 22%. Our projections absorb this spare capacity in 2019, followed by sustained growth at 7.5% for the rest of the period.

Our projections show that, with sustainable growth, native tree producers will be able to double annual production to 20 million trees by 2027, and to produce a total of 160 million trees by 2028.

These projections require forward orders and planning, to allow for the 2- to 4-year lead times to produce plantable native trees. Without some certainty of demand, plant producers will commit their production capacity to other plant types.

Meeting 1BT's goal of more than 200 million native trees planted by 2028 will require an additional 50 million native trees beyond the projected sustainable growth. Attaining this extraordinary growth in native tree production needs a planned industry strategy that includes a partnership between Government, industry and the public. However, the survey shows that three quarters of native nurseries grow both native and exotic plants.

Transitioning even a small proportion of exotic plant production into growing native trees will allow the industry to easily meet the anticipated demand for native trees.

HOW TO GROW 200,000,000 NATIVE TREES

1BT aims to plant more than 200 million native trees by 2028. 10.6 million native trees were produced last year, and the industry will need to more than double production to meet the planting target.

Tree species currently make up 27% of native plant production. Nurseries could simply switch production from native grasses, flaxes and shrubs to produce more. But we believe this is unrealistic, as demand for non-tree species is expected to remain strong to supply other planting programmes such as roading and riparian planting.

During the last financial year, native plant nurseries had estimated production capacity for up to 107.5 million additional plants – 50 million in the North Island and 56 million in the South Island.

Exotic nurseries might also start producing more native trees if they can profitably do so, have spare capacity, and can access capital and skilled labour. Measuring exotic nurseries was outside the scope of this survey.

Increased production will be driven by demand. The survey results highlight that predictability of demand (eg, pre-orders) will encourage investment in tree seedlings, but the procurement process must be appropriate in terms of forward planning, standards, price, and risk sharing.

Figure 6
Production Volume of Native Plants by Plant Type for Last Financial Year

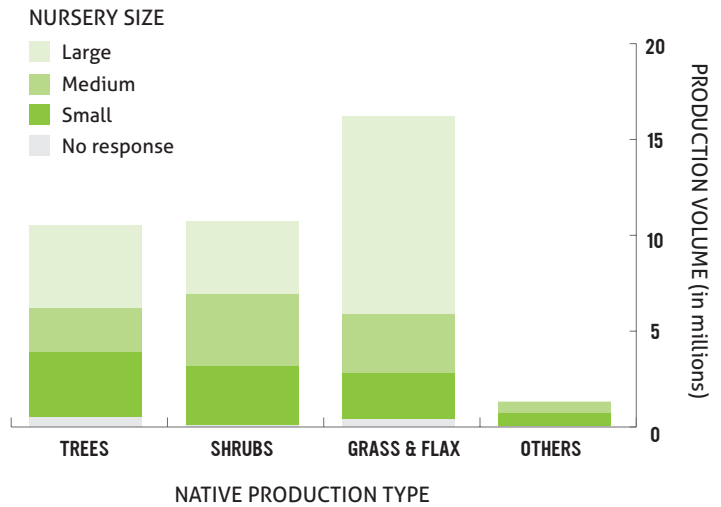
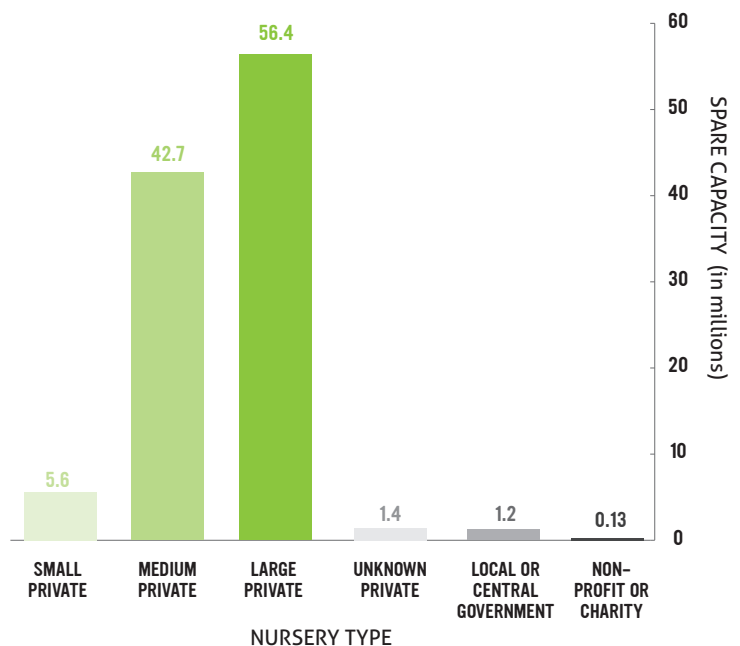


Figure 7
Estimated spare capacity (in millions of plants) for Last Financial Year

Total spare capacity for native and non-native plants = 107.5 millions



From seedling to planting

Native trees need time. A seedling typically takes two or more years from germination to reach a plantable size – slower than grasses, flaxes, and pines. Eco-sourcing – using seeds from the same eco-region where they will be planted – also needs advanced planning, with the benefit that trees will be suited to their environment. Building industry capacity needs to include this extra lead-time, so planning and pre-ordering allow nurseries to meet next year’s demand.

GROWING NEW ZEALAND TOGETHER

Each part of the native tree planting community has strengths to contribute to the 1BT goal.

Private businesses produced nearly 95% of the 10.6 million native tree seedlings sold last financial year. This production is spread across the industry: small and medium nurseries produce a greater proportion of trees than large nurseries, reflecting different specialisation and expertise.

Large production is dominated by grasses, flaxes and shrubs, which quickly grow to commercial size. Automated large nurseries are well-placed to germinate native tree seedlings in bulk for other nurseries to grow-on to planting size. Non-profit nurseries report the largest numbers of voluntary staff, and are able to operate in ways that would be inefficient in private businesses. This emphasis on people can build community support for tree planting, with social wellbeing benefits.

Local and central government nurseries offer more training than private and non-profit nurseries. Nearly two-thirds of staff are working towards the Certificate in Horticulture, and 16.7% are in university courses (compared to 17% and 2% for private businesses, respectively). Planting more native trees means working together to reinforce the strengths of the different parts of the industry. It also means avoiding actions that reduce capacity, such as increasing competition with private businesses which generates a reluctance to invest in tree production. Continued specialisation and collaboration will increase the supply of seedlings, and of labour for planting.

Figure 8

Estimated historical and future production volume (in millions)

Total production for native and non-native plants

FINANCIAL YEAR (FY)

- Last Last FY
- Last FY
- Next FY

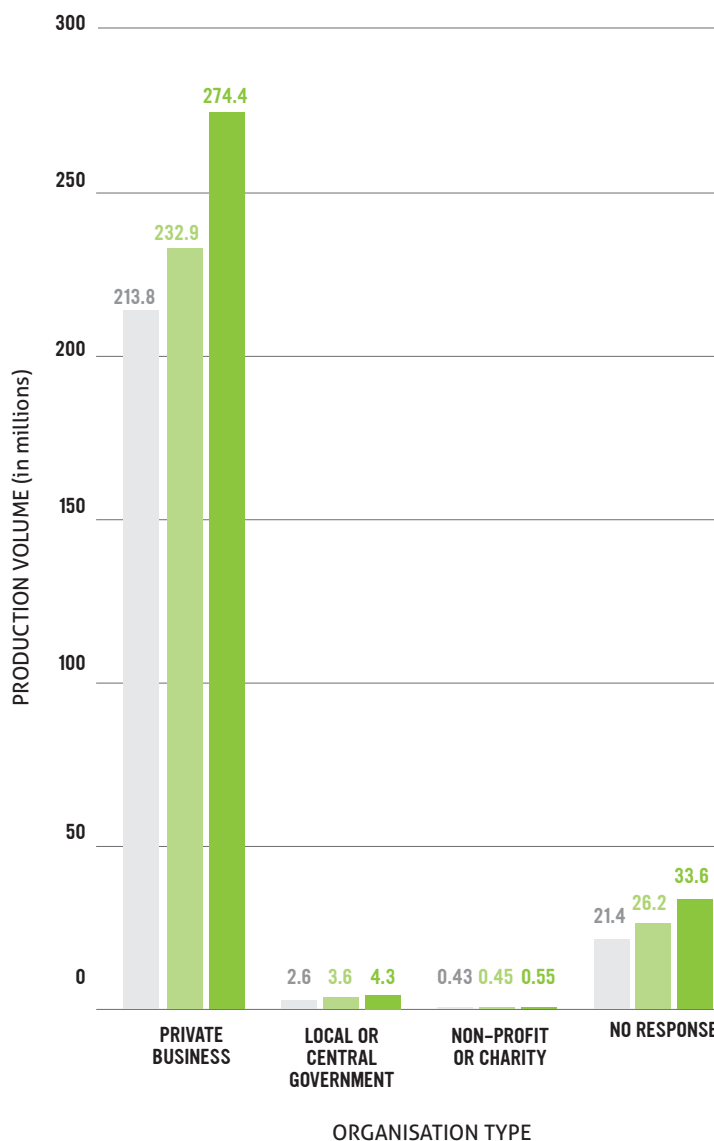
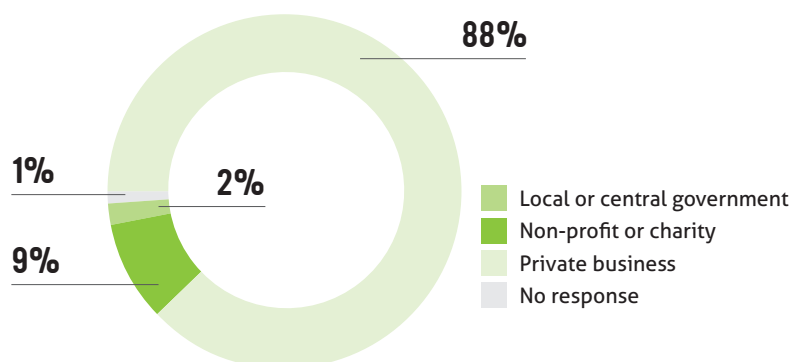


Figure 9

Nursery Type



INSIGHTS

- New Zealand produced 10.6 million native tree seedlings last year.
- The One Billion Trees programme has a target of planting 200+ million trees over ten years. This requires sustained annual growth of 14% from current production.
- Trees account for 27% of the native seedlings produced – the others are grasses, flaxes and shrubs. While tree targets could be met by reducing production of non-tree species, this is unlikely given the continued demand for riparian, revegetation, and other non-tree plantings.
- We believe our industry can sustainably grow at about 7.5% per year. Greater growth will place undesirable stresses on individual businesses, with debt, reduced profitability, and skills shortages.
- This sustained growth (7.5%pa) would allow New Zealand to produce 160 million native tree seedlings over the next decade – at least 40 million short of 1BT’s target for native planting.
- Achieving the targeted 200+ million trees planted will require extraordinary growth, needing a planned growth strategy and Government support for private businesses, organisations, and training agencies.
- This planned growth must recognise the significant contribution that small and medium nurseries make to native tree production. It is also important to support nurseries in all regions, to produce trees suitable for local environments.



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