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RELIABILITY

OF DATA

The New Zealand total net stocked planted forest area is thought to be accurate to about plus or minus 5 percent. This estimate of accuracy is based on expert opinion and has not been determined statistically.

The majority of the data in the NEFD survey is captured through a census of forest owners with 1000 hectares of forest or more. Every year, these owners are asked to provide updated forest description data. Data provided by these large forest owners is considered the most reliable segment within the NEFD area database. These owners made up 1.23 million hectares or 70 percent of the total forest area in 2008. Large forest owners regularly map their forests and apply relatively consistent definitions of net stocked area.

The quality of the data provided by owners with less than 1000 hectares is likely to be more variable in nature. For instance, some owners may report the total land area originally taken out of pasture and put into forest without mapping out unstocked gaps. The difference between “gross” forest area and “net stocked” area is generally of the order of 10 to 20 percent.

The data that make up the 2008 database have come from the sources shown in Table 5.1.

»»» **TABLE 5.1: TOTAL AREA REPRESENTED BY EACH DATA SOURCE IN THE 2008 NEFD DATABASE**

DATA SOURCE	NET STOCKED AREA (000 HA)	PROPORTION OF TOTAL AREA (%)
NEFD surveys (2005–2008)	1 491	85
New planting imputation (1992–2006)	203	11
2004 AgriQuality small forest growers ¹	67	4
Total	1 761	100

Note

1. *Small Forest Grower Survey Report*, AgriQuality New Zealand, April 2005.

Finer scale data, such as the area by age class at a territorial authority level, is likely to be less accurate than the total national forest area.

Forest areas are sometimes misallocated between adjacent territorial authorities. One way for users to minimise this problem is to aggregate data from adjacent territorial authorities, particularly where contiguous forest areas straddle territorial authority boundaries.

»»» NEFD SURVEYS

The data supplied by respondents to this survey are generally accurate and up to date. This reflects the commitment of the forest industry to having detailed forest resource information readily available. However, it is possible that some owners included in the database may change their management objectives. For instance, an area that is reported as intended to be pruned may not end up being pruned.

To minimise possible errors in the NEFD survey data, the following checks were made.

- › Numerical data were limited to certain maximum and minimum values for each entry.
- › Aggregated area data were checked at the territorial authority level against the 2007 NEFD area database to ensure variation was within acceptable limits.
- › For each owner, the data provided in the 2008 survey was compared to data provided by that owner in previous surveys.

»»» IMPUTED NEW PLANTING

The inclusion of the imputed new planting into the 2008 NEFD database makes the following assumptions.

- › The new planting estimates from the nursery surveys are the actual areas of new planting established between 1992 and 2006.
- › The imputed new planting in each territorial authority occurs in the same proportion as the new planting

captured in the NEFD surveys.

- › Imputed new planting for radiata pine is assigned to the tending regimes in the same proportions as the radiata pine new planting captured in the NEFD surveys.

»» YIELD TABLE DATABASE

The radiata pine yield tables contained in the NEFD yield table database were produced during 1995/96, principally from data provided in 1995 by owners of extensive areas of forest. Data were collected from these owners because their holdings covered most districts in New Zealand, they made up much of the forest resource and they had the most suitable yield tables databases in New Zealand. For further details on the NEFD yield tables, refer to *NEFD Regional Yield Tables as at 1 April 1995* (Ministry of Forestry, 1996).

A new set of NEFD radiata pine yield tables is currently being produced. These new yield tables are being validated as part of the new regional wood availability forecasts. Once the wood availability forecasts have been completed in all regions, these new yield tables will be released. This is expected to occur in 2009.