NEFD database. We want to segment these costs by operation (pruning, planting, etc) and other non-operational costs (such as overheads). The information would be strictly confidential to this project and no individual company’s returns would be published. We will also require log price estimates for the log grades (aggregate FRI log grades) used in the NEFD yield tables.”

Specific benefits of the research include:
- better forecasts of future contribution by plantation forestry to New Zealand’s economy;
- soundly-based forecasts of future contribution of forest growing to New Zealand’s economy;
- a model to quantify the national benefits of alternative forest management practices, tree-breeding programmes, research programme, etc.;
- Assistance with developing natural resource accounting principles, and with meeting New Zealand’s commitments to the UNCED conference at Rio.


Predicting and measuring new planting from nursery surveys

John Eyre, Ministry of Forestry

Summary
The Ministry of Forestry carries out two surveys a year, in spring and autumn, of the major nurseries producing planting stock for commercial planted production forestry. The results are used to provide the Minister of Forestry with (a) estimates of areas of new planting planted in the immediate past winter and (b) predictions of potential areas of new planting to be planted in the immediate following winter.

Introduction
Since 1992 there has been a dramatic increase in the number of hectares of new land planting in New Zealand’s production forestry sector. New planting figures for this decade (rounded hectares) are 1990 - 16,000; 1991 - 15,000; 1992 - 50,000; 1993 - 62,000 and 1994 - 98,000 hectares. The 1995 and 1994 figures show record levels of new planting, with the previous highest being 56,000 hectares in 1984.

The process used by the Ministry to estimate new planting from nursery surveys is in four stages:
- nursery surveys
- predicting potential planting area
- an estimate of clearing/felling
- estimate of restocking and new planting.

Nursery surveys
Major forest tree nurseries are surveyed by Ministry office staff by phone, mail and visits, in early November and in early April. The species are surveyed in the National Exotic Forest Description (NEFD) categories of radiata pine, Douglas firs, other exotic softwoods and other exotic hardwoods.

The November survey asks nurseries for the numbers of planting stock sold in that previous winter and a forecast of the net planting stock available at the nursery gate for the following winter. The March survey asks for a forecast of the net planting stock available at the nursery gate for the coming winter.

Results from individual nurseries are aggregated into six areas: Northern North Island (Northland + Auckland); Central North Island (Rotorua + Hawke’s Bay + East Coast); Southern North Island (Wellington); Northern South Island (Nelson); Central South Island (Christchurch); Southern South Island (Dunedin).

Predicting potential planting area
A potential planting area (hectares) is calculated as follows:

The net available planting stock is reduced by two per cent. This is an allowance for stock which may be sold for “non production forest” purposes, e.g. Christmas trees. The two per cent figure was based on a sample survey of nurseries. This gives a “commercially available” figure, which (for the prediction exercise) is rounded down to the nearest 100,000 (a step towards providing a conservative result for the prediction).

A nominal stocking rate is set by species category for each area. This is obtained from local information, usually by Ministry staff talking to company foresters, contractors and consultants, to accommodate different stockings in different locations.

A field wastage factor of five per cent