



REPORT

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NEW ZEALAND

A SURVEY OF THE LOGGING INDUSTRY – 1985

INTRODUCTION

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LIRA has recently completed a survey of the logging industry. The source of the information depended upon the region being surveyed.

In the Central North Island, survey forms were circulated to the major employers in the logging industry. They were asked to provide details on all company and contract crews employed by them. For those crews not employed by one of the major employers, information was obtained from the Department of Labour Bush Inspectors' records.

For the rest of New Zealand, data came from the records of the Regional Bush Inspectors to whom, by law, all logging operations should be reported. While it is unlikely that a complete coverage was obtained, the results nevertheless provide a useful illustration of current logging practice.

ACKNOWLEDGEMENTS

LIRA wishes to thank; the Department of Labour, New Zealand Forest Service, N.Z. Forest Products Limited, Tasman Forestry Limited, Carter Oji Kokusaku Pan Pacific Limited, Pine Milling Limited and P.F. Olsen and Company Limited for their assistance with survey returns.

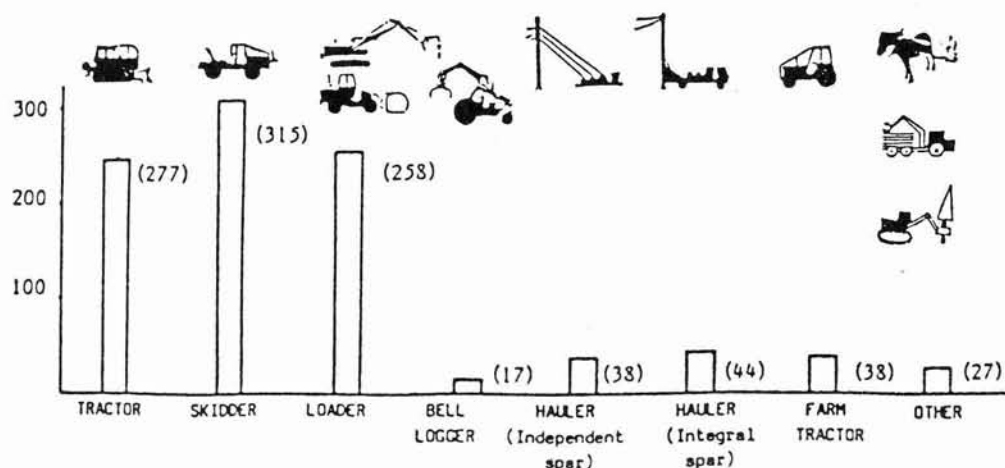
TOTAL NUMBER OF LOGGING OPERATIONS

There were 578 individual logging operations surveyed, with the following regional distribution :

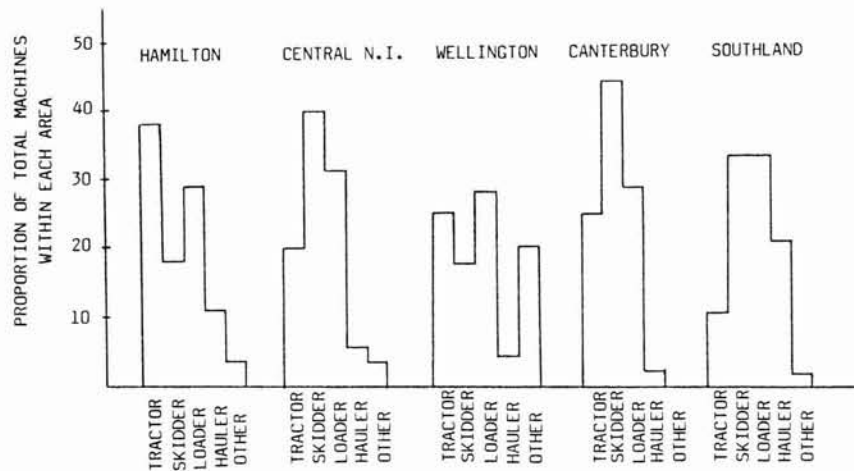
Northland	33	Wellington	50
Hamilton	61	Nelson	29
Central North Island	229	Westland	32
Napier/Gisborne	41	Canterbury	33
Wanganui	42	Southland	28

MACHINERY USED

Combined data for all districts showed the following distribution :



The proportions of machine types differed quite markedly on a regional basis, reflecting not only the nature of the terrain, but also the scale of production of logging operations. Where logging is confined to relatively small operations, crews are more likely to have the most versatile unit - a crawler tractor. Comparative data for five regions are shown below :

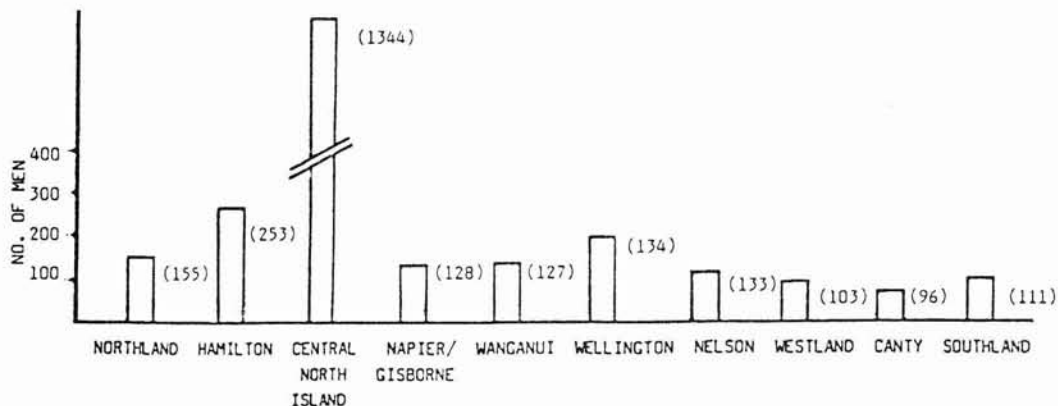


MANPOWER

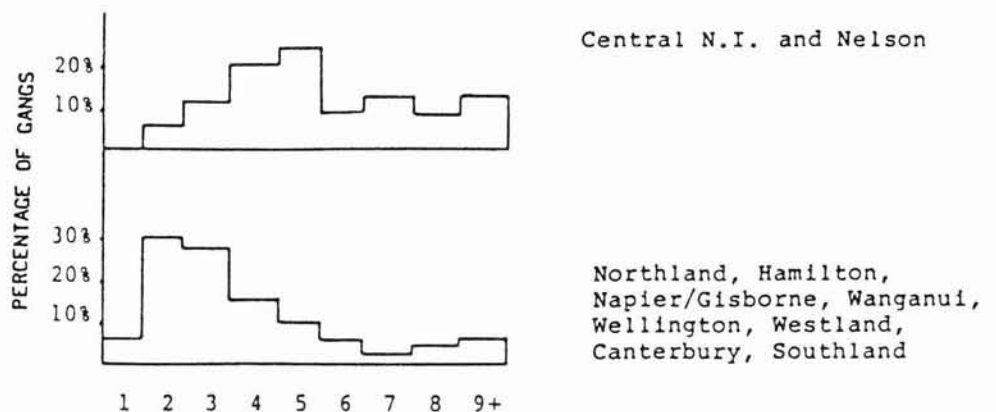
Survey returns indicated a total logging workforce of 2,584. There are two alternative estimates available : Levack (1984) suggested a workforce of 3,598 for the early 1980's, and Crothers and Macpherson (1984) in referring to data extracted from the 1981 Census suggest 3,441 men. There are various reasons for the differences between the values :

- the LIRA/Department of Labour survey could not reasonably expect to get complete coverage.
- the survey returns from both the Department of Labour and the industry included only the labour directly engaged in logging. By contrast, census returns may include some individuals more properly considered supervisors, and contractors who are not on site with the crew.

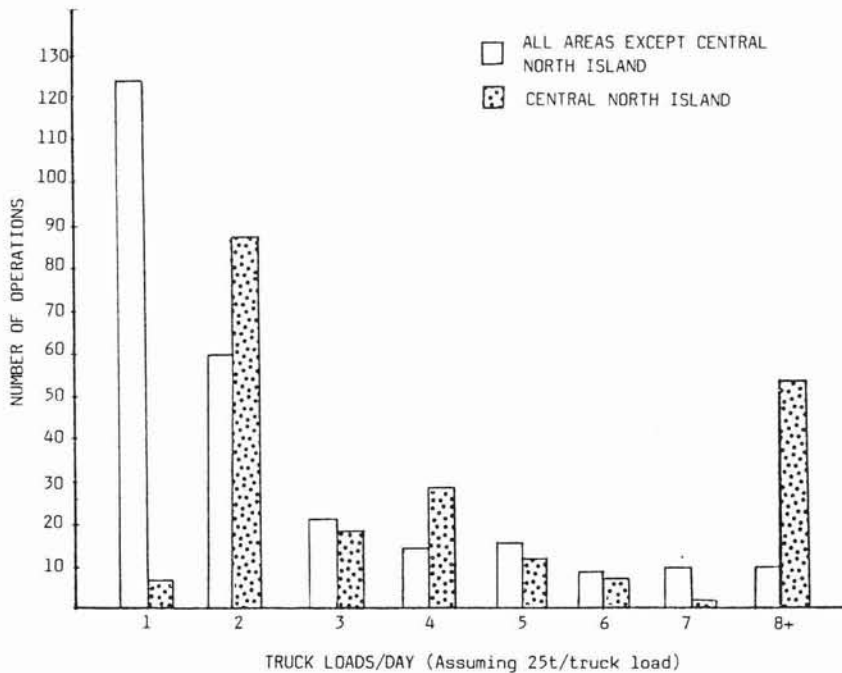
The following histogram shows that from the survey returns nearly half the total workforce are in the Central North Island :



By comparison with the rest of the country, the crew size in Nelson and the Central North Island is quite distinctive. Only in these two areas do more than half the crews have more than four men.



PRODUCTION



The Bush Inspectors were not required to complete this section of the survey if they were not confident in their estimates. A large number of replies were nevertheless received. For the Central North Island, where the industry's own records were used, the estimates can be regarded as fairly accurate. (There were numerous operations in the first category (all areas except Central North Island) for which no production estimates were available).

The large number of crews producing at one to two truck loads per day would be production thinnings crews in the Central North Island, and, mostly limited scale clearfelling operations in the rest of the country.

FOREST OWNERSHIP

On a nationwide basis, 181 crews were recorded as working in State forest, 360 crews in private forest and 30 in both. Thus, although approximately half of New Zealand's annual roundwood production comes from State forests, only one-third of all crews are producing it.

The proportions of forest ownership varied between regions. In Northland, 42% of the surveyed operations were in State forest and in Westland 81%, whereas in Hamilton and Canterbury districts the figure was only 25% and in Napier/Gisborne 10%.

CLEARFELLING OR THINNING

On a national scale, 64% of the operations surveyed were involved in clearfelling, 32% in thinning and 4% in both.

There is considerable regional variation in the proportions. It seems that outside the Central North Island the combined effects of the age of the resource and the state of the local post and pole market have more effect on the number of thinnings crews than does the proximity of a pulpmill or MDF plant. Thus, Northland, Wanganui and Wellington have a high proportion of thinning operations.

EXOTIC FOREST OR INDIGENOUS FOREST

The survey results date from before the New Zealand Forest Service's more recent policies on logging indigenous forest, although it must also be remembered that a substantial proportion of the indigenous forest logged is on private land. For all returns, the distribution was :

Exotic forest	83% of crews
Indigenous forest	14%
Both	3%

TOPOGRAPHY

In this classification, the responses could be expected to fairly subjective. For all survey returns, the results showed :

Easy	29%
Steep	19%
Mixed	52%

FOREST TRACT SIZE

Again, the classification could be interpreted subjectively, but for all survey returns the results were as follows :

Medium/large forest	67%
Woodlot	10%
Shelterbelt	8%
Combination	15%

While woodlots were not well defined, it is interesting that more forests were not in this category. Canterbury had the highest proportion of loggers working exclusively in shelterbelts (39%).

CARTAGE — OWN TRUCK OR SEPARATE CARTAGE CONTRACT

For all survey returns, the results were :

Own truck	23%
Separate cartage contract	77%

In New Zealand's high production logging operations, it is uncommon to find that the logging crews have their own trucks. In small-scale operations, this is a much more common practice. The own-truck situation was highest in the Wanganui and Napier areas (59% and 48%), and lowest in the Central North Island and Southland areas.

FULL YEAR OR SEASONAL LOGGING

A comparison of the regions produces some interesting results. In Central North Island, Southland, Canterbury and Westland over 90% of the crews operated all year; in Nelson, Wellington and Wanganui the corresponding figure was 75%; and in Northland, Hamilton and Napier/Gisborne areas only approximately 50% of the surveyed operations kept going all year.

FURTHER ANALYSIS

This publication has provided only preliminary analysis of the survey data. With the statistical package LIRA has available, it is feasible to test interrelationships in the data - for instance, variations in the machinery used with terrain type and forest size, or crew size as a function of equipment used. Such analysis is the subject of a more detailed report of the survey which is in preparation.

A thorough survey of the logging industry as at March, 1974 was completed by Fraser, Murphy and Terlesk of the Forest Research Institute (Economics of Silviculture Report, No. 84 1976 (Unpublished)). Now slightly more than a decade later some comparative, although less detailed, information is available.

References:

Crothers, C and Macpherson, C. "Selected Demographic and Social Characteristics of the Forestry and Logging workforces and Comments on the Possible Social Significance", The University of Auckland, Department of Sociology, Working Papers in Comparative Sociology, No. 13, 1984.

Levack, H.H. "Estimating Future Manpower Needs for Harvesting New Zealand Forests", In " Human Resources In Logging - Proceedings of Seminar". Edit. R.L. Prebble, N.Z. Logging Industry Research Association, Rotorua, July 1984.

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