

## 1986/7 LOGGING WORKFORCE SURVEY

(PRELIMINARY RESULTS FROM THE BAY OF PLENTY)

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### INTRODUCTION

Although logging is one of New Zealand's oldest industries, relatively little is known about the characteristics of its workforce. In view of the considerable growth that will take place in this sector over the next ten to twenty years, it is essential, from a recruitment and training perspective, to know more about the people that provide their labour to the logging industry.

Furthermore, if New Zealand is to compete successfully in the overseas market place, precise information will also be required about those features of the work environment that reduce productivity. For example, factors such as; labour turnover, accidents, absenteeism, and strikes can cost the logging sector millions of dollars each year. Clearly, the provision of useful information on these factors will provide substantial economic and social benefits for the logging industry.

The only previous attempt to describe the logging workforce in New Zealand was made by Fielder (1979), in which he interviewed 125 loggers from the Bay of Plenty. The study characterised loggers as being "of the age of prime physical fitness, poorly trained for their present job, prone to accidents, liable to show a high rate of turnover, and likely to hold their job in relatively low regard".

While Fielder's study provided a valuable insight into the nature and character of the New Zealand logger, it was intended only as a pilot study. During 1986, LIRA, in association with the Forest Research Institute, Rotorua, began a major survey of the logging workforce. The two locations chosen for the survey were the Bay of Plenty and Northland - the Bay of Plenty because of its long history of exotic logging and Northland as an example of an area where a substantial increase in harvesting is expected over the next decade.



*Figure 1 - Felling - the most preferred job in logging*

Information was collected by means of structured interviews using a questionnaire compiled by the authors. The first part of the questionnaire gathered information on a wide range of biographical data (e.g. age, marital status, pay, time in logging), as well as information on; education and training, accidents, safety and industry awareness. Questions relating to gang production and capital equipment were also included.

The second part of the questionnaire measured job satisfaction using the Job Descriptive Index (JDI), developed by Smith, Kendall and Hulin (1969). The JDI is an

internationally used and recognised method of measuring job satisfaction. It measures a worker's satisfaction with five facets of his job - the work itself, supervision, pay, promotional opportunities, and co-workers.

A random sample of those gangs to be surveyed in the Bay of Plenty was taken from a Register of logging gangs compiled by Liley (1985). In total, 37 gangs were surveyed, resulting in 202 interviews. (This sample size was sufficient to give an error margin on the responses of  $\pm 7\%$ ). It was proposed that all Northland logging gangs would be surveyed and this was expected to yield a further 150 interviews. The interviews were carried out by experienced LIRA staff members who were familiar with good interviewing techniques.

Interviewing has been completed in the Bay of Plenty and the Northland survey has commenced and is expected to be completed by mid-1987. Due to the amount of information being collected in the survey, the findings will be presented over several Reports. The purpose of this first Report is to provide some preliminary results from the Bay of Plenty sample, which will serve as a base for more detailed Reports. These Reports will focus in more detail on topics such as; accidents and safety, education and training, gang productivity and job satisfaction.

#### ACKNOWLEDGEMENTS

*The authors would like to acknowledge the co-operation of the 202 loggers who took part in the survey, the contractors, gang foremen and the individual companies for allowing the survey to be conducted.*

## RESPONDENT CHARACTERISTICS

Of the 37 gangs surveyed, nearly 90% were employed under contract. The small number of Company gangs surveyed (only 4), confirms the noticeable trend in recent years from Company to contract logging. The type of operations performed by these gangs were fairly evenly split between clearfelling and thinning. The average gang size was 5.6, although gang size varied from 3 to 12 men.

### Age

In Fielder's (1979) study, the average age of loggers was found to be 31 years. Little difference was noted in the present study where the equivalent figure was 29.5 years. The age range was from 15 years to 62 years. The age distribution of the loggers interviewed is shown in Figure 2.

### Time in Logging

Table 1 shows the length of time spent in logging and the length of time spent with the current gang. The average time in logging was 8.1 years and the average time in the current gang was 5.5 years. The loggers were also asked how many gangs they had worked in. That question was somewhat confused by Company employees who tend to move frequently between Company gangs. Therefore, these cases were treated as having only worked in one gang. On this basis, the mean number of gangs worked in by respondents was 3.05, with over one-third of the respondents having worked in 4 or more gangs.

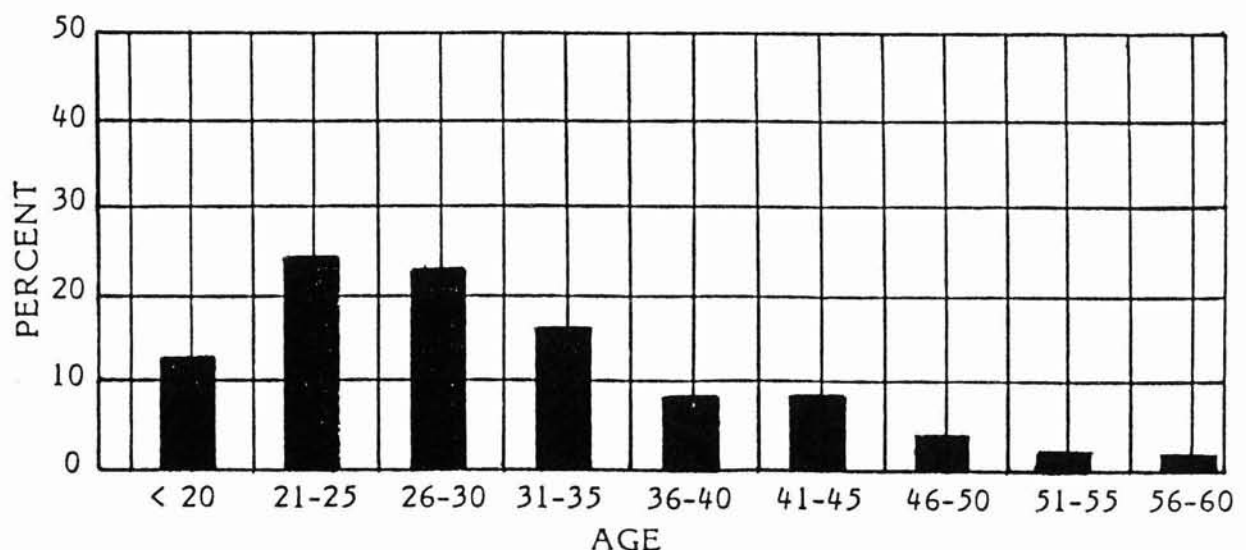


Figure 2 - Age Distribution of Loggers Interviewed

*Table 1 - Length of time in logging and current gang*

<u>LENGTH OF TIME IN LOGGING</u>			<u>LENGTH OF TIME IN CURRENT GANG</u>		
<u>Period</u>	<u>No.</u>	<u>%</u>	<u>Period</u>	<u>No.</u>	<u>%</u>
Less than 3 months	9	4.5	Less than 3 months	33	16.4
4 to 6 months	5	2.5	4 to 6 months	17	8.5
7 to 12 months	5	2.5	7 to 12 months	8	4.0
1 and < 2 years	12	5.9	1 and < 2 years	43	21.3
2 and < 3 years	14	6.9	2 and < years	24	11.9
3 and < 4 years	6	3.0	3 and < 4 years	17	8.5
4 and < 5 years	14	6.9	4 and < 5 years	19	9.5
5 and < 9 years	62	30.7	5 and < 9 years	25	12.4
10 years or more	75	37.1	10 years or more	15	7.5

More than two-thirds (68%) of the respondents had 5 years or more logging experience. However, the fact that about half had worked with their present gang for less than 2 years, suggests that labour mobility within the logging industry is high.

## CONDITIONS OF EMPLOYMENT

### Pay

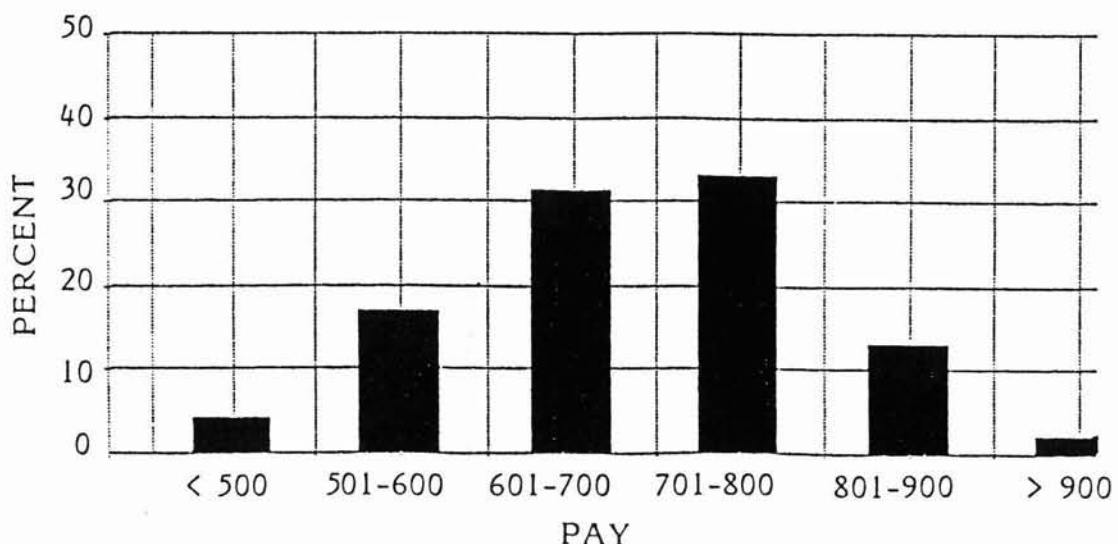
Questions were asked in order to establish "take home" pay. Unfortunately this information tended to understate the true take home pay of those employees who had automatic payments. Also, no attempt was made to separate allowances such as saw or clothing. One comment frequently made by those who were receiving saw allowance was that this allowance had fallen well behind the actual cost of running a saw. The prime contractor was not required to answer questions relating to pay.

Given these qualifications, the average take home pay per fortnight was just under \$700. The range was from \$400 to \$930. The pay distribution is shown in Figure 3.

The majority (86%) of loggers were paid wages, with only 13% working on a piece rate system. Most (81%) were paid fortnightly, the balance being paid weekly. Bonus systems were not common, with only 25% receiving a bonus of some sort.

### Hours of Work and Travel Time

The average hours "on the job" was 8.1, with a range of 6.5 to 10 hours. Average time spent travelling to and from the work place each day was 1.4 hours. This ranged from half an hour to 2.5 hours, implying an average working day of 9.5 hours. Nearly all loggers interviewed (90%) were paid travel time.



*Figure 3 - Distribution of fortnightly take home pay*

## RECRUITMENT — OPPORTUNITIES AND RETENTION

### Recruitment

The most popular reason given for working in logging (Figure 4) was the attraction of working outdoors. Pay as the main reason was given by only 18% of respondents.

When questioned about how they were recruited into logging, over three-quarters said they were told about the job by a "friend or relative". Only slightly more than 10% had actually answered an advertisement.

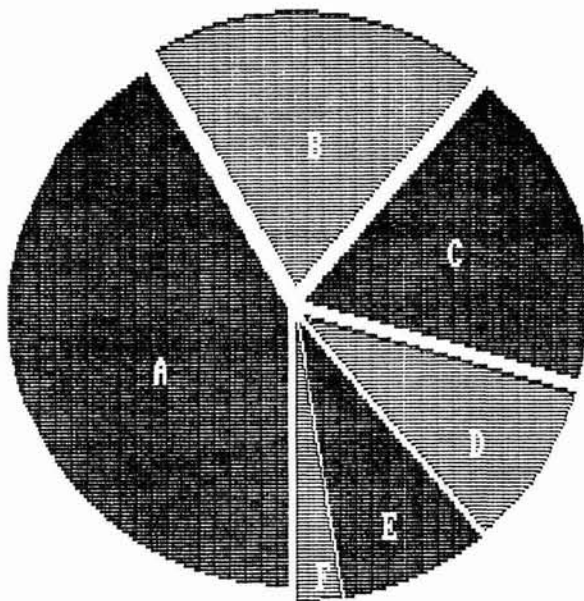


Figure 4 - Main Reasons for Working in Logging

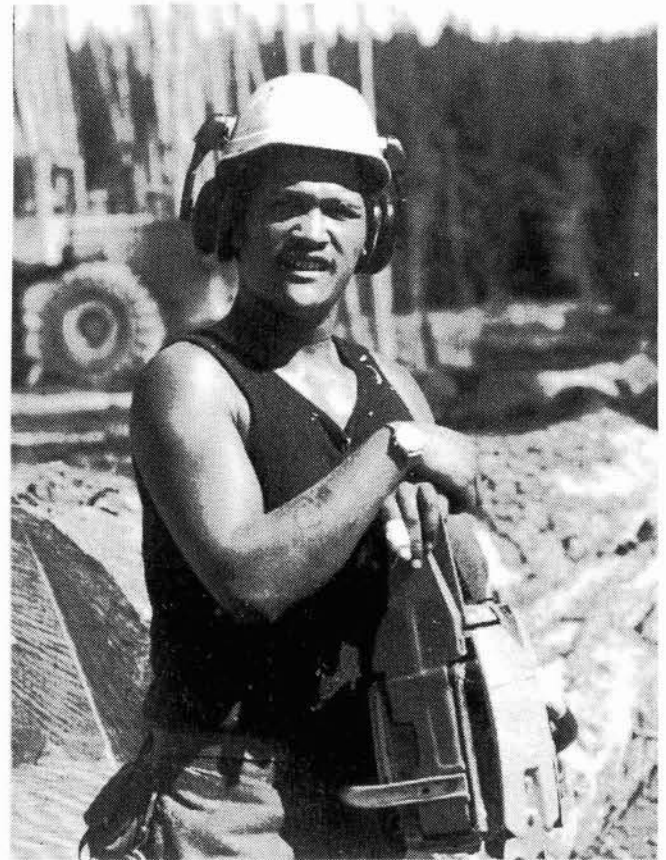


Figure 5 - How do young people without "contacts" find a job in logging?

When asked why they went to work for their current employer, 36% responded by saying that there was a job available. Other major reasons given were that they had asked for a job with that gang (12%) or that they owned that gang, i.e. had become the contractor (11%).

The view that loggers are attracted to outdoor work is further supported by information about their first job after leaving school (Table 2). There appears to be some tendency for respondents to have followed in their father's footsteps in that two-thirds of respondents had fathers involved in rural outdoor work. There also appears to be a link between farm employment and a later move to logging, with nearly one-third of respondents showing this transition.

Table 2 - Father's Occupation and Respondents First Job after Leaving School

<u>FATHER'S OCCUPATION</u>	<u>No.</u>	<u>%</u>	<u>FIRST JOB</u>	<u>No.</u>	<u>%</u>
Forestry	11	5.4	Forestry	18	9.0
Logging	69	34.3	Logging	42	20.8
Agriculture	47	23.4	Agriculture	60	30.1
Other	74	36.8	Other	80	40.1



## Opportunity in Logging for School Leavers

When asked if they thought there was much opportunity for school leavers in logging, 62% said yes. Most, however, qualified that by saying "things need to improve". When asked what could be done to improve the opportunity, responses included; higher pay, improved image of logging and that gangs should employ one school leaver per year. A common response was that a training centre be set up, where school leavers could learn the basics of logging and how to work in a contract situation.



Figure 6 - Breaking out for a hauler - a skilled job - will he be there in five years time?

Concern was expressed, especially by the contractors, that contract rates had got so "tight" in recent years that they could not afford to employ unskilled people. The rationale for such a statement was that any logger employed had to be immediately productive. Loggers themselves are clearly concerned about the need for some formal training system.

## WORK SKILLS AND JOB PREFERENCES

Respondents were questioned about the skills they had developed while working in logging and also asked to estimate how long each job took them to learn (Table 3).

## Retention

The loggers interviewed were asked if they thought they would still be in logging in five years time. The data suggests that only about half were sure that they would.

When asked how many of these jobs they thought they were competent at, the majority (72%) said all of them. The reasons given for a particular job being preferred were numerous. The main reasons though were; "interesting" (24%), "challenging" (20%) and "easy" (15%).

Table 3 - Work Skills, Learning Time and Job Preferred

Job	Done in Present Gang	Done in Previous Gang	Normal Job	Most Preferred	Time to Learn
	No.	No.	No.	No.	Months
Fell and Trim	173	189	88	89	8.1
Breaking out	153	175	6	11	3.7
Skid work	160	176	24	18	2.9
Skidder Op.	107	139	31	33	7.7
Tractor Op.	39	80	5	7	8.5
Loader Op.	78	102	20	14	8.2
Hauler Op.	8	27	2	2	9.1

## ACCIDENTS AND SAFETY

As a more detailed Report is intended at a later date, only a brief summary of information recorded is being presented here. Ten questions were asked about accidents and safety. The first five related to whether or not the logger had suffered an accident during the past five years. If the answer was yes, details of the accident(s) were recorded, including the extent to which anyone had discussed the accident with them and if any recommendations had been made so as to avoid the accident happening again. They were also asked if they suffered from any occupational diseases, such as; back problems, white finger etc. Details of the safety clothing worn by each logger was also noted.

Of the 202 loggers interviewed, 56 had suffered at least one accident in the last five years (24 had had more than one accident). Of that 56, less than half (25) had had the accident discussed with them. The main person involved in discussing accidents with the victim was his immediate supervisor or boss. Alarming, in none of these cases was a recommendation made to avoid the accident happening again. (The recommendation to "take more care" in nine accidents cannot be regarded as adequate.)

With regard to safety clothing worn, it was pleasing to note that 30% wore safety trousers and 48% wore safety chaps. In a recent LIRA Report (Gaskin 1986) a substantial reduction in chainsaw cuts to the legs was noted. Some of that reduction was attributed to the recent development of protective legwear. It is encouraging that such a large percentage (78%) were wearing some form of leg protection.

The majority of loggers (64%) had their safety equipment supplied by their employer or, in the case of Company gangs, by the Company, with 28% supplying their own. The remaining 8% were a combination of employer and self-supplied.

## DISCUSSION AND IMPLICATIONS

The study suggests that the average age in the logging industry is some five to six years younger than that for the remainder of the male workforce. This observation can be linked to the physically demanding nature of the work which makes it difficult for older workers to remain within the industry.

Given the need to consider recruitment strategies for the industry as it prepares for a period of expansion, it must be of concern that nearly one-half of those interviewed were unsure of their future in the industry. However, as with Fielder's (1979) study, it would appear that loggers are generally skilled in most aspects of logging. Such flexibility will be of advantage to the logging sector in that it provides a broad skill base upon which to build an expanding workforce.

In terms of the recruitment of loggers, the more traditional method of advertising a vacant position appears to be little used, as "word of mouth" (i.e. told by a friend or relative) was the basis of 75% of recruitment. This suggests that for an outsider or school leaver with no "contacts", getting into logging in the Bay of Plenty would be difficult.

Although there appears to be a commitment by loggers to wearing basic safety apparel, the relatively high accident rate within the industry suggests that accident prevention is painfully inadequate. This is supported by the finding that over 40% of accident victims experienced more than one accident in the last five years. The lack of attention paid to discussing accidents with victims needs urgent attention by all those concerned.

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