

## DEMOGRAPHIC COMPOSITION OF THE MANAGEMENT STAFF OF SMALLER NEW ZEALAND FOREST COMPANIES

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### ABSTRACT

*A questionnaire was circulated to New Zealand forest companies to ascertain the demographic characteristics of the forest management group. Of the 12 companies approached, seven replied.*

*The survey results showed that 96% of the workforce was male, 4% was female. Only 7% of the management workforce identified themselves as Maori.*

*The most common tertiary qualification was a Bachelor of Forestry Science degree from the University of Canterbury. There were considerable age differences between those with technical qualifications (Ranger, Woodsman, New Zealand Certificate in Forestry (NZCF)) and those with university qualifications.*

*With the dismantling of the New Zealand Forest Service Training System, it seems likely that a university qualification will become the dominant qualification in the forest management sector.*

### INTRODUCTION

Considerable knowledge about the demographic and workforce characteristics of logging and forestry workers in New Zealand has been obtained through LIRO/LIRA workforce surveys (Adams, 1993; Bomford and Gaskin, 1988; Byers, 1995; Byers and Adams, 1995; Gaskin, Smith and Wilson 1989; Gibson, 1994). However, little is known of the demographic characteristics of the forest management group.

Crothers and MacPherson (1984) examined census data over a ten-year period, which showed that in 1971 and 1976 the logging supervisory workforce was solely male. By 1981, 4.3% of the supervisory workforce were women. Gaskin (1990) found in a postal survey of 25 logging supervisors that their average age was 36 years, and on average they had spent 4.1 years as a logging supervisor. Twenty percent of these supervisors were Maori; the remaining 80% were European.

Gaskin (1990) reported that the most common qualification of these supervisors was a NZCF (46%); 8% had a University degree. Gibson (1994) found that 10% of the company staff he surveyed were Maori.

The management sector has grown considerably since 1989 when 140 people were employed. In 1993, 288 people were employed. By February 1995, 549 people were employed in the forestry and logging management group (NZFOA, 1996).

The main objective of this study was to determine the demographic composition of the forest management group. For the purposes of this study 'management' was defined as those people (other than administration staff) employed by forest companies who were paid a salary.

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#### METHODOLOGY

A letter explaining the purpose of the study was sent to the Chief Executive Officers of all forest companies informing them of the project and asking for their co-operation (the survey questionnaire was enclosed). Follow up telephone calls and letters were made in an attempt to increase the reply rate. Of the 12 companies to whom the questionnaire was sent, seven responded. These were the smaller forest companies.

#### RESULTS AND DISCUSSION

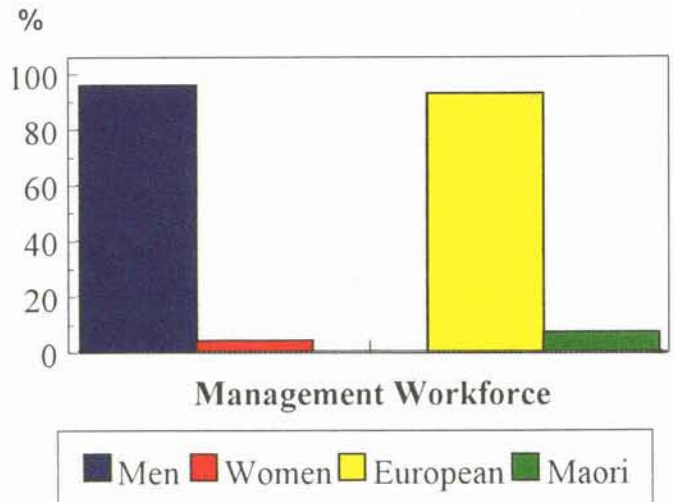
The seven forest companies who returned completed questionnaires, provided

information on 130 people. The questionnaire responses accounted for 24% of the forest management group, using the NZFOA's 1995 figure of 549 management personnel.

#### Demographics

Overall, women accounted for 4% of the workforce and men for 96% (Figure 1). Maori comprised 7% of the total workforce (Figure 1). The proportion of Maori management staff was low. The proportion of Maori management staff was also low when compared to the logging and silvicultural workforces. Byers and Adams (1995) found that 13% of the Otago Southland workforce identified themselves as Maori, and in a 1994 NZFOA Census, 45% of the workforce identified themselves as Maori.

*Figure 1 - Gender and ethnicity of forest management staff*



The average age of the men surveyed was 37.8 years ( $\pm 8.9$ , range 20 to 65). The women were clustered in a very narrow age group (range 28 to 31), and were on average 29.4 years old; over eight years younger (on average) than the men.

Maplesden and Langer (1993) reported that of the 44 women who had graduated with a forestry degree from the University of



Canterbury, 63% were (as at 1993) employed in the forest industry. This indicates that women were under-represented in this survey.

### Salary

Men's average salary was in the \$45,001 to \$50,000 bracket, salaries ranged from \$20,000 to over \$65,001 (Table 1). Women's salaries ranged from \$25,000 to \$50,000, the average salary for women was in the \$40,001 to \$45,000 bracket. Those women who are currently in the industry have a low average age; as these women gain more experience, it would be expected that the average salary of women in the forest industry will increase.

*Table 1 - Salaries of management staff*

Salary Bracket	Salary Range (\$)	Women (%)	Men (%)
1	\$20,000 - \$25,000	0.0	1.0
2	\$25,001 - \$30,000	20.0	2.9
3	\$30,001 - \$35,000	0.0	4.9
4	\$35,001 - \$40,000	20.0	14.7
5	\$40,001 - \$45,000	40.0	25.6
6	\$45,001 - \$50,000	20.0	14.7
7	\$50,001 - \$55,000	0.0	8.8
8	\$55,001 - \$60,000	0.0	7.8
9	\$60,001 - \$65,000	0.0	4.9
10	Greater than \$65,001	0.0	14.7
	Total	100.0	100.0

\* Salary information was not provided for all respondents.

### Years with Company

Overall, 71% of the management staff had worked for their current forest company for five years or less (Table 2). Almost half (49%) of these management staff had been employed for four years or less. This shows that generally, most of the management staff of these companies have only been employed for a relatively short time. This can partly be explained by the recent entry of some of these companies into the New Zealand forest industry. Several of them may have retained employees from the previous forest owner (New Zealand Forest Service).

However, the average time spent with these forest companies was 6.2 years for men and 4.0 years for women. This can be mostly attributed to the lower average age of the women. They were all at the beginning stages of their careers, and therefore had not been in the workforce for very long. There was no appreciable difference between the time spent with the forest companies by ethnicity.

*Table 2 - Years with forest company*

Years with Company	Percentage (%)	Cumulative Percentage
<1	8.6	8.6
1	10.5	19.1
2	11.4	30.5
3	7.6	38.1
4	10.5	48.6
5	21.9	70.5
6-10	9.5	80.0
11-15	10.5	91.5
16-20	2.9	93.4
20>	6.6	100.0
TOTAL	100	100.0

### Salary and Time spent with Forest Company

There was an overall trend (shown in Table 3) of increasing salary with increased time spent with the company up to salary bracket 7. Those people in salary brackets of 1 to 3 (\$25,000 to \$35,000) or less had all spent less than two years (on average) with the company.

*Table 3 - Salary and time spent with forest company*

Salary Bracket	Average time spent with company	Total people
1	1.0	1
2	1.5	4
3	1.9	6
4	3.5	14
5	5.8	28
6	3.9	16
7	11.7	9
8	3.6	8
9	8.4	5
10	11.7	15
		106

Those in the top two salary brackets had spent 8.4 to 11.7 years with their current forest company, considerably longer than the average time spent with current forest company for the management group as a whole (6.2 years). Those in the salary brackets of 4 to 7, had spent (on average) between 3.5 to 11.7 years with the company.

### Qualifications

The proportions of Maori and women in this survey were too small to reveal any valid differences between the qualifications held by Maori and European or by men and women (Table 4). As this workforce was dominated by European men, it was not surprising that they held most of the tertiary qualifications.

The most common tertiary qualification held was a Bachelor of Forestry Science (B. For. Sc.) degree from the University of Canterbury (Table 4).

Of those men who gave information about their qualifications, 23% held a B. For. Sc. and 2% held a Masters in Forestry Science (M. For. Sc.). The most common technical qualification for men was a Woodsman Certificate (16%), followed by NZCF (15%), and Ranger Certificate (13%). Two women in this survey held a Master of Science (MSc) degree, one had a B. For. Sc. degree, one had a NZCF and one had a draughting certificate.

### Age and Qualifications

There were clear differences between the ages of those who held the various tertiary qualifications (Table 4). Those with Ranger, Woodsman and NZCF qualifications were, as a group, between seven and ten years older than those who had a B. For. Sc degree. The lower median age for graduates with B. For. Sc. degrees indicates that a forestry degree is becoming a common entry qualification for the forest industry. The older ages of those with Ranger and Woodsman Certificates can be attributed to the phasing out of these qualifications. Currently, the NZCF is also being phased out, and will be replaced by a National Diploma in Forestry. It is likely that over time, graduates with a National Diploma in Forestry will fill the positions currently occupied by management staff with NZCF, Ranger and Woodsman qualifications.

Those with Ranger, Woodsman and NZCF qualifications will continue to age as a group. The median age of those with forestry degrees may increase, but this will depend on the number of graduates entering the industry, and the length of time they stay within the forest industry.



Table 4 - Qualifications held by forest management staff

	Men		Women	Total	Median Age
	European	Maori	European	N <sup>o</sup>	(years)
Bachelor of Forestry Science	27	1	1	29	29.5
Master of Forestry Science	3	-	-	3	39.0
Bachelor Forestry Science + Ranger or New Zealand Certificate Forestry	2	-	-	2	39.0
Bachelor of Engineering (Forestry)	2	-	-	2	23.5
Master of Science	1	-	2	3	28.5
Bachelor of Science	4	-	-	4	35.5
Bachelor of Commerce	1	-	-	1	43.0
New Zealand Certificate in Forestry (NZCF)	12	3	1	16	38.5
Ranger Certificate	12	1	-	13	43.0
Woodsman Certificate	15	1	-	16	38.5
Other Forestry Certificate	5	-	-	5	34.0
Other Certificate	3	1	1	5	37.0
School Qualification	5	-	-	5	35.0
Information not given	24	2		24	37.0
TOTAL	116	9	5	130	

### Salary and Age of Management Staff

Table 5 shows that overall those in the older age groups received higher salaries. Those who earned less than \$35,000 were on average less than 30 years old. Those who earned between \$35,000 and \$50,000 were on average, aged between 33 and 37 years old. This was the largest group; 54% of the staff employed by these forest companies were in this income bracket.

There was a close cluster of ages in the \$50,000 to \$65,000 salary bracket. The average ages of these three groups varied by just over one year (39.5 to 40.6).

The average age of those in the highest salary bracket (greater than \$65,000) was the highest (50.0 years), ten years older than those in the salary bracket below (Table 5). As well as being considerably older than those in the next bracket down,

those who earned more than \$65,001 had also spent a great deal more time with the company; on average they had spent the last 11 years working for the same forest company.

*Table 5 - Salary, and age of management staff*

	Salary Range (\$)	Average Age	Total *
1	\$20,000 - 25,000	20	1
2	\$25,001 - 30,000	28.5	4
3	\$30,001 - 35,000	28.5	6
4	\$35,001 - 40,000	33.1	14
5	\$40,001 - 45,000	35.9	28
6	\$45,001 - 50,000	37.7	16
7	\$50,001 - 55,000	40.6	9
8	\$55,001 - 60,000	39.5	8
9	\$60,001 - 65,000	39.8	5
10	Greater than \$65,001	50.0	15

\* salary information was not available for all employees.

### Salary and Qualifications

Figure 2 shows the salary ranges for employees with various levels of qualifications. Those without any formal qualifications were concentrated in the less than \$45,000 salary brackets. Although they were represented in almost every

salary bracket, 7% were in the highest income bracket. This indicates that a lack of formal qualifications has not posed any insurmountable barriers for some people within the forest industry.

With the exception of salary bracket 10, most of those employees with technical qualifications (NZCF, Ranger, Woodsman, Forestry, and other Certificates) were clustered in the \$40,000 to \$50,000 salary brackets. No employees with technical qualifications were in the lowest income bracket.

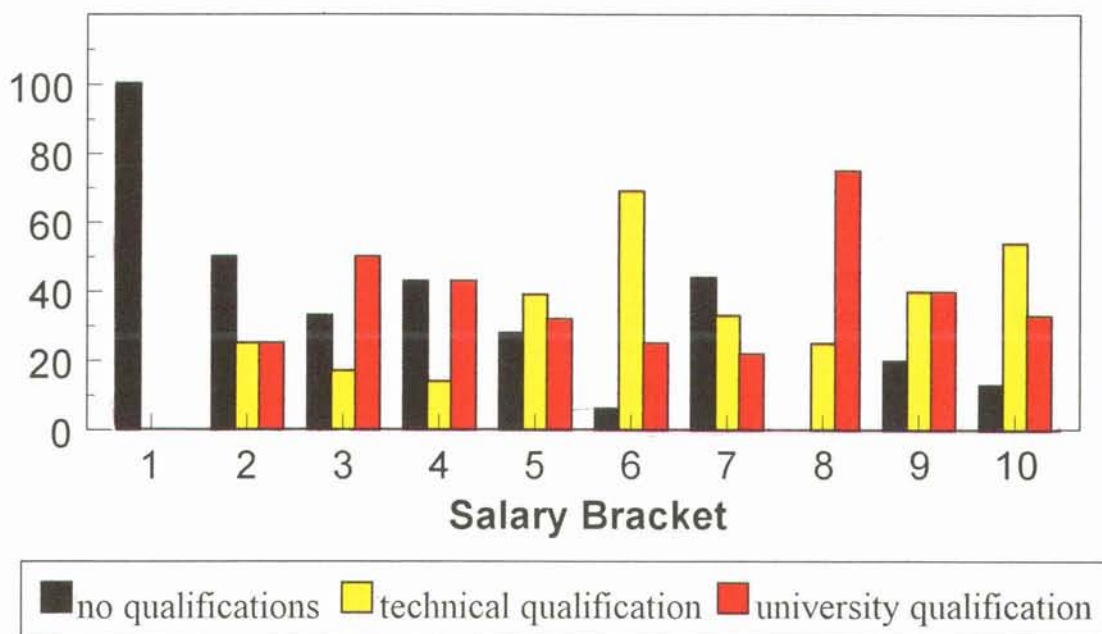
The salary brackets for those with University qualifications were spread from \$25,001 to greater than \$65,000. Most of the University graduates salaries (50%) were clustered between \$35,001 to \$50,000. Thirteen percent of University graduates were in the highest income group.

It is likely that given the younger average age of those with University Qualifications (particularly B. For. Sc.), and the overall trend toward increasing salary with increasing age that those with University qualifications may eventually dominate all the salary brackets in the forest management group. Currently, the highest salary bracket is dominated by those with technical qualifications.

Due to the small proportion of women and Maori in the sample, it was not possible to make any comparisons between men and women, or between European and Maori. Any comparisons would have compromised the confidentiality of the women and Maori in this study.

*Figure 3 - Salary and qualifications of forest management staff*

% of salary bracket



## CONCLUSIONS

This survey covered seven forest companies. The results give an indication of the demographics of the management sector in smaller forest companies.

In this survey, European men dominated the workforce. There was a low proportion of Maori in the management sector of these companies (7%), especially when compared to the logging and silvicultural workforces. Maori were represented in all of the salary brackets.

The shorter amount of time which the women had spent with the forest company was reflected in the lower salaries earned.

The most common tertiary qualification held by the total forest management group was a B. For. Sc. from Canterbury University, followed by Woodsman, Ranger and NZCF qualifications. This trend is likely to continue as the Woodsman and Ranger training systems no longer exist, and the NZCF has been superseded by a

New Zealand Diploma in Forestry. Future new entrants to the forest management group will most likely have a university qualification.

Those employees with Woodsman, Ranger and NZCF qualifications will remain in the higher age brackets. The average age of this group will increase until all the group have either left the industry or retired. As the number of new entrants in the industry with degrees increases, those employees with Woodsman, Ranger and NZCF qualifications will make up a decreasing proportion of the total management workforce. Those with University qualifications will become an increasingly dominant group within the management sector.



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