



REPORT

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ANALYSIS OF LOST TIME ACCIDENTS — 1990

(Accident Reporting Scheme Statistics)

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INTRODUCTION

The Logging Industry Accident Reporting Scheme recorded its sixth year of data collection in 1990. Little change occurred to the number of lost time accidents reported for this year compared with 1989. This was surprising given that the number of lost time accidents reported for the final quarter of 1990 was 27 compared with 52 for the same period in 1989.

This substantial reduction may be related to the change in ownership of large areas of forests and the new owners not being fully aware of the need to report accidents. The Accident Reporting Scheme was set up by LIRA to provide industry with an independent data base of logging accidents. The Scheme is a voluntary one but the forest owners have in the past accepted responsibility for ensuring that LIRA is notified of all accidents.

The importance of this data base can not be over-emphasised. It is hoped that all the new forest owners, and those who have expanded their resource, will acknowledge the importance of this Scheme by continuing to support it.

Those members not familiar with the Scheme should contact the author for further information.

The following report is an analysis of the Lost Time Accidents reported to the Scheme during the 1990 calendar year.

Table 1 - Accidents Recorded by the Scheme for 1990

	1989	1990
<i>Fatal Accidents</i>	5	2
<i>Lost Time Accidents</i>	238	241
<i>Minor Accidents</i>	15	23
<i>Near Miss Accidents</i>	42	28
<i>Unknown</i>	-	1

ANALYSIS OF 1990 LOST TIME ACCIDENTS

Lost Time Per Accident

Of the 241 lost time accidents, the average number of days lost per accident was 13 (similar to the 1989 figure of 12 days). The number of days lost ranged from 1 to 190. The number of days lost is often estimated, so caution must be used when interpreting this figure.

The distribution of time lost per accident (Figure 1) has changed little. Over 50% of the accidents resulted in five days or less lost time. Many of these accidents are unlikely to have been recorded by the Accident Compensation Corporation accident data base for logging since less than five days were lost.

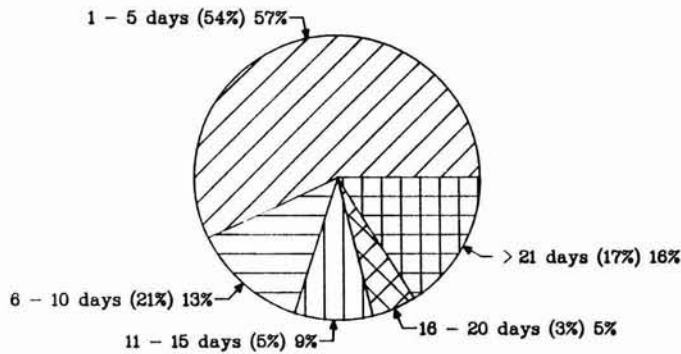


Figure 1 - Distribution of Lost Time per Accident
(1989 equivalent in brackets)

According to the data received, a total of 2508 days were lost, which is over 10 man years. The equivalent figure for 1989 was 2801 days or 12 man years. This is part of a long term trend downwards from 3211 days lost in 1988 (13.7 man years).

Time of Day of Lost Time Accidents

The trend for most of the accidents to occur between 7.00am and 10.00am (the first work "run") continued, with 41% of the accidents occurring during this period (Figure 2). The percent of accidents that occurred between 10.01am and 1pm remained the same, while the percent for the last period of the day dropped slightly.

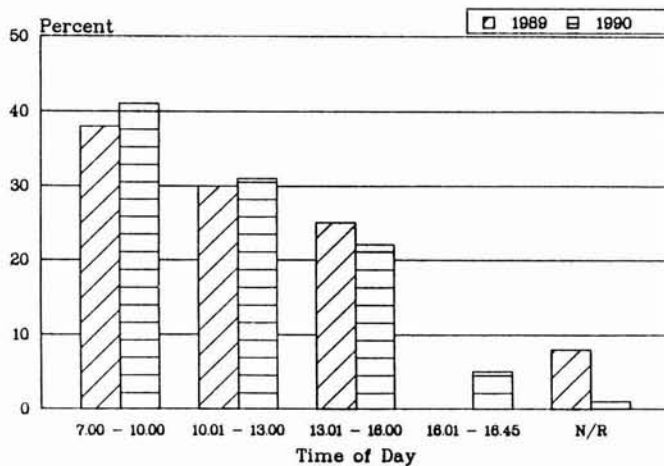


Figure 2 - Lost Time Accidents by Time of Day

Type of Operation

Comparisons with 1989 data are shown in brackets. There was little change from 1989 in the number of accidents by type of operation (Figure 3). The proportion of clearfell accidents increased slightly, a reflection of the increased clearfelling activity in comparison to thinning over the last two years. The majority of the accidents, 61% (66%), occurred in skidder operations. Tractor operations had the same percentage of accidents as last year (15%). Following the trend that started in 1989 the accidents in hauler operations (19%) again exceeded that of the tractor operations (15%). This could be related to the increase in steep country operations reflected in the number of new hauler operation start-ups. Further analysis is required to determine if this trend is a result of insufficient training or poor techniques.

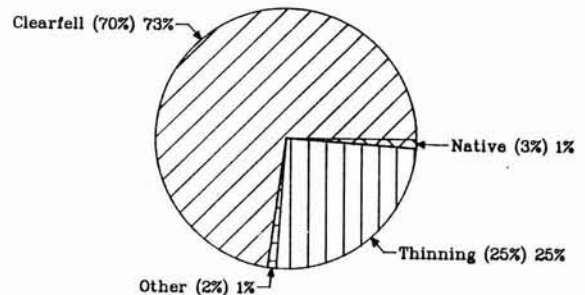


Figure 3 - Lost Time Accidents by Type of Operation
(1989 figures in brackets)

The average number of days lost per accident in clearfell increased by 2 days while in thinning it decreased by 2 days (Table 2). The number of days lost for all lost time accidents increased slightly to 13 days.

Lost Time Accidents and Logging Task

Although the proportion of accidents attributable to felling reduced from 1989 figures (28% down from 35%), felling was still the part of the operation where most accidents occurred. This follows the trend started in 1989 where it overtook trimming as the most dangerous job in logging. Last year also saw an increase for trimming, breaking out and other accidents.

Table 2 - Accident Severity - Clearfelling versus Thinning* (Days Lost)

Type of Operation	Number	Severity (days lost per accident)	
		1989	1990
Clearfell	143	12	14
Thinning	49	12	10
All Lost Time Accidents	192	12	13

* The number of observations does not correspond with the data in Table 1 due to missing information about the amount of time lost.

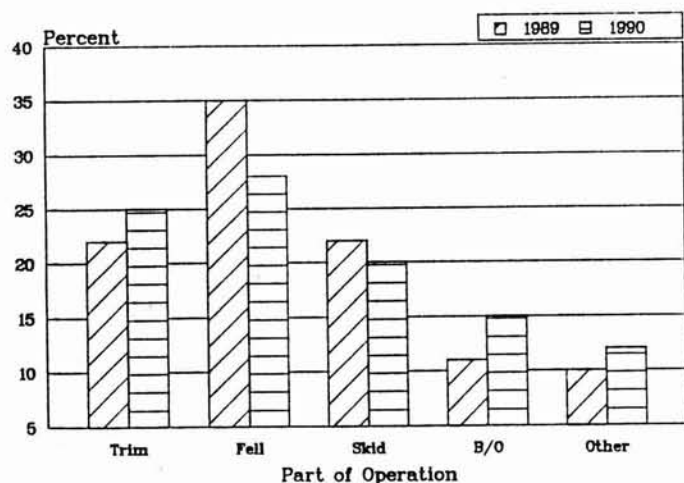


Figure 4 - Lost Time Accidents by Part of Operation

The number of laceration accidents dropped 6% in 1990 from 41% to 35%. An alarming increase of 9% occurred with bruising accidents, (from 25% to 34%). Fracture accidents and strain/sprains remained static at 14% and 11% respectively (13% and 12% in 1989).

This year 22% of all the lost time accidents were chainsaw related in comparison with 32% in 1989. Rolling logs caused 11% of accidents (21%), while 34% of accidents were caused by the logger being struck by an object (same as 1989).

Lost Time Accidents and Location of Injury

As with last year the lower legs were the part of the body most frequently injured, 22% versus 19% (Figure 5). The hands and feet were the second most frequently injured part of the body (17% versus 15% and 14% respectively in 1989).

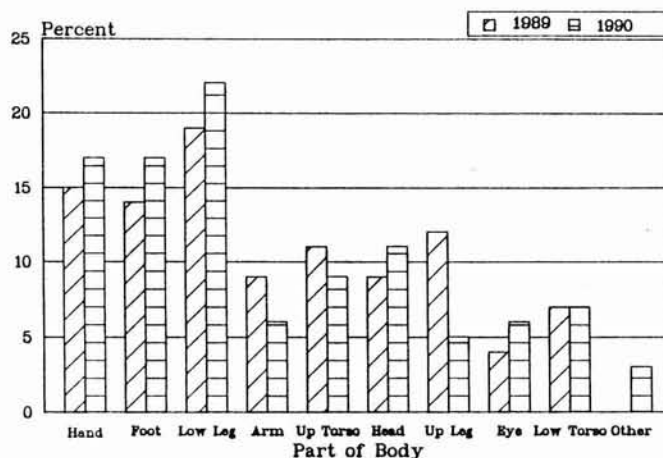


Figure 5 - Lost Time Accidents by Part of Body

In total, 66 accidents occurred to the legs which is slightly fewer than 1989 (73). A breakdown of accidents to the legs, hands and feet is shown in Table 3.

Table 3 - Accidents to the Legs, Feet and Hands

<i>Part of Body</i>	<i>Number of Accidents</i>	<i>Chainsaw Related Accidents</i>		<i>Other Cause</i>	
		<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
<i>Lower Leg</i>	53	8	15	45	85
<i>Hands</i>	40	16	40	24	60
<i>Feet</i>	42	15	36	27	64
<i>Upper Leg</i>	13	6	46	7	54

Of the accidents to the lower leg, 12 were caused by the person slipping or falling over, 11 by logs rolling and 13 by the person being struck or hit by an object.

There were two leg accidents where the protective legwear failed. On both occasions the garments had lifted up the leg and the padding had twisted around so the leg was not protected.

There was one case where a chainbrake failed to work resulting in a five day lost time accident.

As in the 1989 data, it is disturbing to see that the hands have a higher incidence of chainsaw injuries than the feet. Two of the hand injuries were caused by a short mitt combined with kickback. There was one hand injury due to a handle being put on to a file. There were three injuries caused when filing chains. Many of these accidents can be avoided, especially the filing ones, if operators wore gloves when using chainsaws.

CONCLUSION

The number of lost time accidents recorded by the Scheme from 1989 (238) to 1990 (241) remained relatively static.

The hands, feet and lower legs are again the parts of the body most likely to be affected by injury in logging operations. It is, however, encouraging to note that chainsaw related accidents are continuing to

reduce. Two accidents to the legs noted that the protective equipment had twisted around the leg. Operators must ensure that chaps are securely fastened so there is less chance of this movement occurring.

LIRA will be continuing to monitor the effectiveness of chainbrakes in reducing the severity of chainsaw injuries to the hands. To this end, a project has commenced which will investigate the mechanical reliability of chainbrakes, amongst other aspects of chainsaw ownership, over a period of a year.

LIRA is currently updating the 1985 survey of logging contractors to obtain up-to-date information on the number and type of logging operations working in New Zealand. This information will be used to determine if increased accident numbers in specific areas (such as cable hauling) are due to an increase in the number of operators or other factors.

Finally, the new forest owners are urged to continue providing LIRA with ALL logging accident information. Forms for collecting this information are available from LIRA.

For further information, contact:

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