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LOST TIME ACCIDENTS IN FORESTRY - 1990

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INTRODUCTION

This report presents information on lost time accidents that occurred in forestry during the 1990 calendar year. Lost time accidents are defined as those where an injury results in four hours or more time lost. Forestry is taken to include the following operations - nursery work, establishment, thinning to waste, pruning and a miscellaneous group of accidents associated with forest maintenance and it excludes logging.

The data have been collected using the same format as the Logging Industry Accident Reporting Scheme (ARS) (Gaskin, 1986). One of the objectives was to assess the suitability of this Scheme's application to the collection of forestry accident information. The data presented are from records provided by the following companies:

- Tasman Forestry Limited
- N.Z. Forestry Corporation Limited
- NZFP Forests Limited
- Baigent Forest Industries Limited

During the time that the data were collected, the above companies employed approximately 80% of New Zealand's forestry workforce.

While the logging industry is well served with regular accident information, little information exists for other parts of the forestry sector.

Information collected and used in the following analyses included:

- Date and day of week that the accident occurred
- Time of day
- Age, experience (in years) and L&FITB Forest Skills level of accident victim
- The part of body injured and the type of injury sustained
- The amount of time lost (in days)
- The type of operation being performed

Further, the analyses are restricted to only lost time accidents. Information on minor and near-miss accidents was collected but data for these were limited to only six records.

ACKNOWLEDGEMENTS

LIRO acknowledges the co-operation of the companies who supplied the data used for these analyses.

RESULTS

Due to the limited number of companies providing data for this report, only trend information is presented. Wherever possible, a comparison is made with the information from 1990 on logging accidents (Wallace, 1991).

During the 1990 year, 58 lost time accidents occurred in forestry. For the same period, 241 lost time logging accidents were recorded. However, the ARS has 100% New Zealand coverage.

Time of Accident Occurrence

Figures one, two and three show the month, the day of week and the time of day respectively that the 58 accidents occurred. More accidents occurred in May than any other month, followed by March and April. This is similar to the trend observed in the ARS. The low number of accidents during December and January reflects the typically short "holiday" nature of these months. Why October and November should have the lowest number of accidents could not be explained.

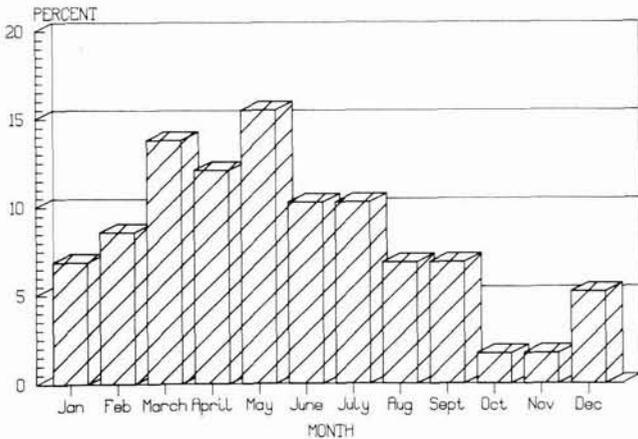


Figure 1 - Month of Accident

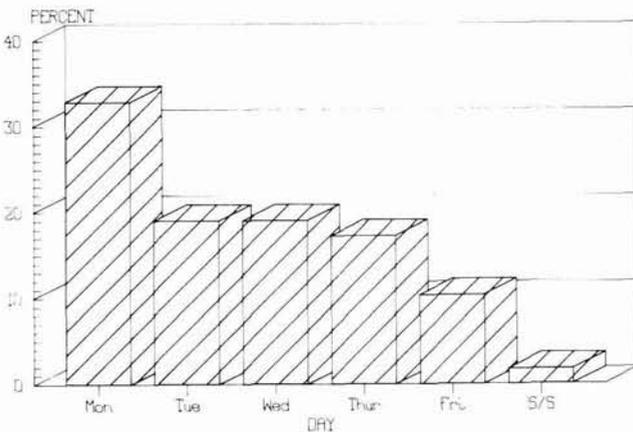


Figure 2 - Day of Week of Accident

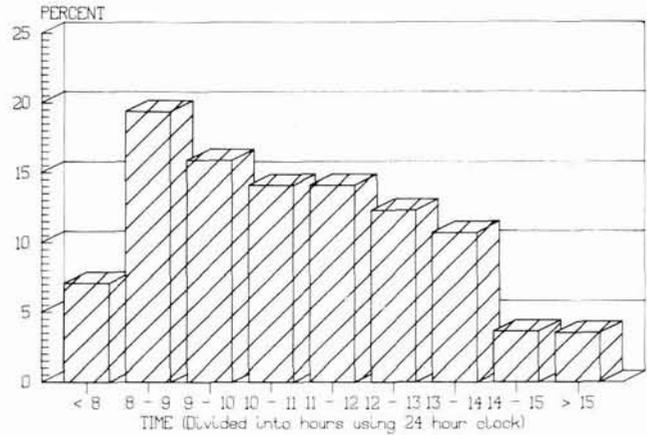


Figure 3 - Time of Day of Accident

Almost one-third of forestry accidents occurred on Monday, with only 10% on Friday. This is similar to the trend found in the ARS.

Seventy percent of the forestry accidents recorded occurred before midday.

The trend for accidents to occur early in the week and during the first half of the day, follows a similar pattern to logging accidents. These data suggest that fatigue is not a major contributor to accidents. If it was, workers would be at more risk both later in the day and week as they become tired.

Type of Operation

Thinning to waste and pruning accounted for 78% of all lost time accidents recorded, with 60% of the waste thinning accidents the direct result of chainsaw use. Nine of these accidents were chainsaw cuts to the leg. Unfortunately the accident report forms did not state whether or not the operators were wearing protective legwear or not, although one "near miss" accident report noted that "protective legwear had prevented a potentially serious injury."

Forty percent of the waste thinning accidents occurred while walking between trees and 44% occurred while preparing the tree for felling or actually felling. Half (11) of the pruning accidents were as a result of lost footing; five were falls from the tree being pruned.

Part of Body Injured and Type of Injury

As with logging accidents, the lower leg was the part of body frequently injured accounting for 28% of the lost time accidents (Figure 4). Twenty five percent of these lower leg injuries were the result of the chainsaw making contact with the leg.

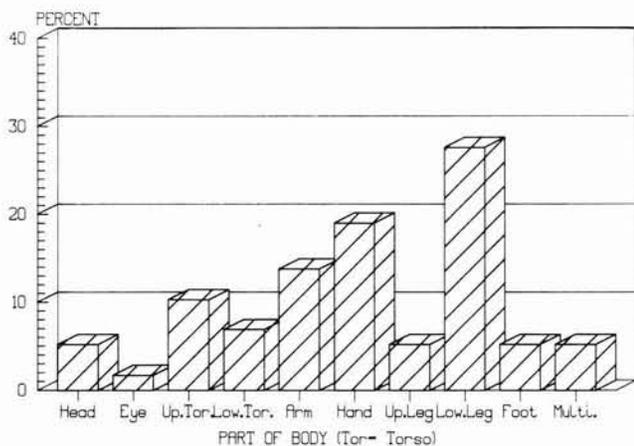


Figure 4 - Part of the Body Injured

The hand was next most frequently part of the body injured (19%), followed by the arm (14%) and the upper torso (10%).

The most common types of injury were lacerations (45%), typically sustained by making contact with either a chainsaw or a pruning tool. One laceration accident occurred while the worker was making his lunch! Strains accounted for a further 24% of recorded accidents.

Time Lost per Accident

Of the 58 lost time accidents noted, 55 recorded the number of days lost. The average number of days lost for each accident was 11.6, with a range of 1 day to 70 days. The type of operation with the highest average number of days lost per accident was "establishment" with 16.4 days, followed by "thinning to waste" (12.8 days) and "pruning" (9.7 days). It must be stressed that these figures are based on limited data and should only be seen as indicative.

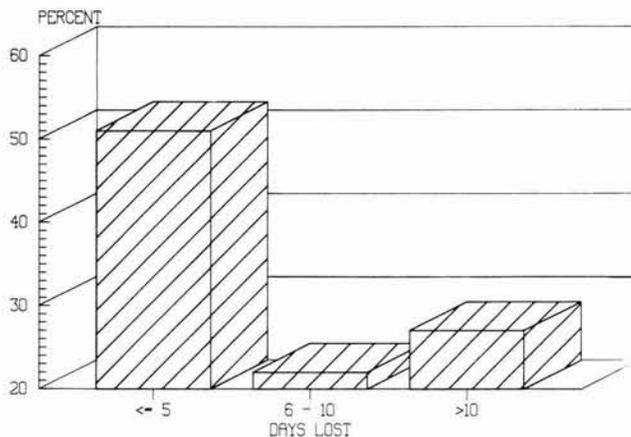


Figure 5 - Time Lost per Accident

The distribution of time lost per accident (Figure 5) is similar to that found for logging accidents. Over 50% of the accidents caused the worker to be absent for five days or less, and so would be unlikely to come to the attention of the Accident Compensation Corporation.

Age and Experience of Accident Victims

Data collected relating to age and experience was more complete than that collected under the Logging ARS. Of the 58 lost time accidents, 56 recorded the age and 50 noted the victim's experience. Figure 6 illustrates the age distribution of forestry accident victims and Figure 7 the distribution of length of service.

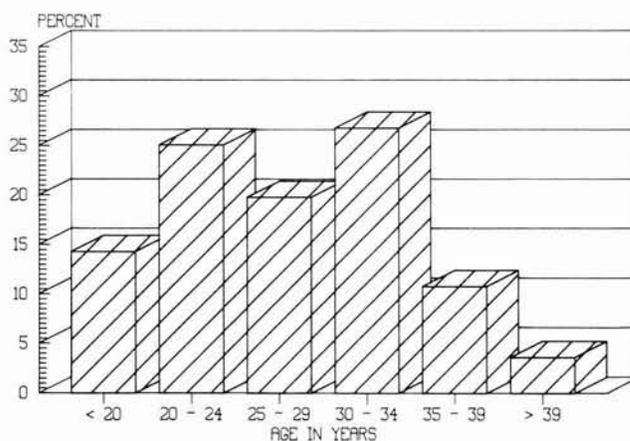


Figure 6 - Age of Accident Victims

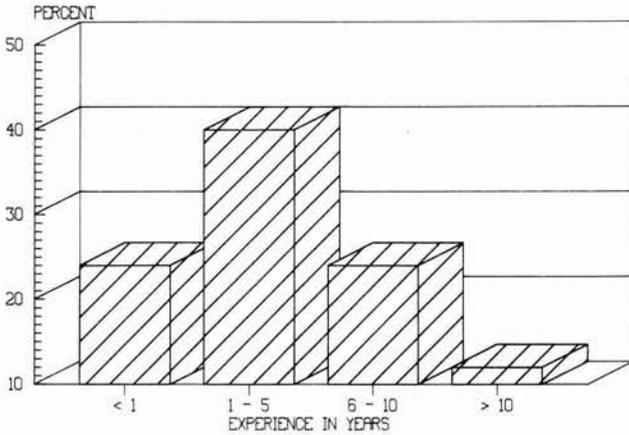


Figure 7 - Length of Experience of Accident Victims

One-quarter of the lost time accidents were to workers aged between 20 and 24 years, with 59% to workers under 30 years. Unfortunately, no demographic information is available to enable these results to be compared to the forestry sector work force.

Twenty-five percent of the accident victims had worked in forestry for less than one year, while 64% of the accident victims had five years or less forestry experience. Again, no information exists to relate this information to the forestry sector work force.

DISCUSSION AND CONCLUSIONS

Although the results presented in this report are based on limited data, there are nevertheless some interesting trends:

- Accidents occurred early in the day and early in the week
- 50% of the accidents necessitated the victim being off work for 5 days or less
- The chainsaw contributed to a large proportion of the lost time accidents.

- Protective legwear, when used, reduced the severity of chainsaw inflicted injuries.

These trends are similar to those observed for logging accidents. One of the objectives of collecting these data was to assess whether the logging accident recording system could be used also to record forestry accidents. It appears that this same format could be used with only minimal modification.

This report highlights the severity of forestry accidents. While the logging industry has a well established accident monitoring scheme, the trends shown in this report reflect the importance of extending the logging industry ARS to give full forestry/logging coverage. This would assist in the development of techniques and protective equipment which will result in a reduction of the number and severity of accidents occurring to the forestry worker.

REFERENCES

- Gaskin, J.E. (1986) : "Analysis of Lost Time Accidents - 1985", LIRA Report, Vol. 11 No. 6.
- Wallace, K. (1991) : "Analysis of Lost Time Accidents - 1990", LIRA Report, Vol. 16 No. 2.

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