

SAFETY AND HEALTH OF WOODLOT LOGGERS

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Originally Steve Williams the OSH Inspector based at Palmerston North was given the job of addressing this conference. However he kindly delegated this task to me.

Twelve years ago Ian Taylor, Bush Inspector with the Department of Labour addressed a LIRA Conference on Limited Scale Logging. His talk was entitled "Safety in Limited Scale Logging". Ian identified safety problems which he had seen in these operations:

- pressure of financial survival
- lack of suitable operator protection on machines
- poor condition of machinery (particularly brakes and steering)
- lack of adequate tracking
- trees often grown in remote locations, invariably close to fence lines
- the high proportion of untended stands
- farmers demanding trees be back-pulled away from fence lines and grasslands be left untouched
- no resources (time, money or venue) for training either employers or workers in safety skills
- elementary safety precautions neglected
- the transitory nature of contracts

Ian Taylor estimated in 1984 from Department of Labour accident data that the proportion of serious accidents in limited scale logging operations was five times greater than that in regular scale operations.

Twelve years later - is the woodlot logger still at risk of serious harm or death ?

I analyzed serious harm and fatality data reported to OSH between April

1993, when the Health and Safety in Employment Act came into force, and February 1996. 447 serious harm accidents (including fatalities) occurred in forestry. 425 of these were from commercial logging operations (excluding treework and firewood accidents). Of these 425 commercial logging accidents, 99 occurred in woodlots throughout New Zealand (Table One). In other words, 23 percent of serious harm accidents in commercial logging occurred in woodlot logging.

There were 20 fatalities in commercial logging operations during this 33 month period. Woodlot accidents account for 13 or 65 percent of these. There were 10 fatalities in non-logging activities such as firewood and treework.

Figure One shows in which task the serious harm/fatal accidents occurred in woodlot logging. Nearly two out of three involved fallers. Seven out of the thirteen woodlot fatalities were fallers (Figure Two). The next most at-risk task was machine operator. They comprised 15 percent of the serious harm accidents and five out of the thirteen fatalities.

Accidents while trimming accounted for 33 percent of injuries to woodlot fallers. Three of the seven faller fatalities involved bringing down hang-ups. Three of the five operator fatalities involved a machine rollover.

Since joining OSH in Palmerston North in April 1994 Steve Williams has investigated six of the woodlot fatalities, four being fallers, one an operator of a loader and one an operator of a bulldozer carrying out roading construction in a woodlot operation. He has also had to

investigate two farmers killed during treework and a faller killed in a regular logging operation. 9 fatalities in thirty months.

I asked Steve about his opinion on woodlot logging in the lower North Island. He believes that woodlots are not generally well controlled in comparison with plantation crews which are visited by supervisors on a regular basis. He feels they are not being checked regularly by competent people. Steve believes there has been a gradual shift in safety culture and that standards are improving.

He is implementing the Act using consultation, advice, education and information as well as evaluating compliance. Steve gives practical advice on matters such as correct signage and where to obtain it. Steve carries out an overall inspection of the operation first unless he spots something drastically wrong first. He concentrates upon crews' work practices then inspects their compliance with the paper systems (accident register; emergency procedures; hazard identification; training).

There is a range information which Steve can provide employers to assist them with compliance. OSH has a "Self Management Compliance" (SMC) Package; a Hazard Index System (HIS) for Ground-based and Cable operations; OSH Bush Bulletins and Safety Codes. Steve believes that an up-dated Approved Code of Practice for Logging Operations would greatly assist woodlot loggers with compliance.

Apart from these, Steve recommends where necessary, training via the Logging and Forestry Industry Training Board (L&FITB). He strongly advises employers to train employees to NZQA standards via FIRS Modules. Steve is a member of the local Forestry Industry Training Advisory Group (FITAG) and also represents OSH on the local Forestry Contractors Association (FCANZ). He feels that training opportunities for woodlot loggers are

very limited in his area. He believes that formal training of safe work procedures to recognized industry standards, creates a positive attitude towards compliance generally.

Companies which engage woodlot crews often have the resources to provide trainers and safety meetings. These forums between company, woodlot crews and OSH have been held and did create an excellent opportunity for discussion. Again the success of these programmes depends upon the attitude of the employers and the principal.

Steve sees indicators to him of a high risk woodlot crew are: poor house-keeping on the skids; incorrect or no signage in place; machinery badly maintained. Stump surveys which reveal poor felling skills; a boss who is seldom on the job; general morale of the crew low.

To Steve critical indicators of a low risk woodlot crew are: a willingness to improve; well maintained machinery even if its old; good house-keeping; a lower than average staff turn-over; an employer proactive towards training; a compliance system which works for the crew.

In conclusion. Woodlot loggers represent an extreme-risk element of the New Zealand logging industry. Pilot survey data reveals that they receive less formal logging training than their regular counterparts in plantation logging. There are fewer opportunities. The hazards are, however, higher for a number of social, environmental and economic reasons.

OSH has a mandate under the Health and Safety in Employment Act to promote compliance with the Act with the object of preventing harm to employees at work. To assist in this critical area of compliance I am recommending to OSH, as their forestry researcher the following pro-active strategy:

- That OSH investigate what practicable steps principals of woodlot contractors are taking to ensure that -
 - (a) No employee of a contractor or sub-contractor; and
 - (b) If an individual, no contractor or subcontractor is harmed while doing any work that the contractor was engaged to do. (Section 18, HSE Act).
- That OSH take a more pro-active approach in producing an Approved Code of Practice for ground-based and cable operations as an assistance towards compliance by small woodlot crews and principals.
- In addition to the safe work practices, OSH target on-the-ground at-risk woodlot crews by analyzing "Notification" data as well as other data-bases such as OSH Serious Harm Injury Data.
- In conjunction, develop a quality inspection system for OSH inspectors to allow monitoring of compliance performance based upon a Hazard Record Database.
- Continue formal liaison with key industry stakeholders (including ACC; FCANZ; FITEC and Aotoeroa Woodworkers Union) to foster more efficient compliance.

Compliance with the Act will prevent harm in woodlot operations. This must be made easier and less costly for smaller, less well-resourced workplaces. Approved Codes of Practice are seen as valuable in providing key details of practicable steps which may be taken in woodlot operations. OSH views the Codes as a key part of its information provision under the Act.

The majority of woodlot crews are contracted by wood buyers or their agents. Many of these wood buyers are also large forest owners who have logging crews contracted to work in plantation forests. OSH believes as contractors to forestry-based principals, woodlot contractors should be ensured the same level of safety and

health by the principal, as the principal's plantation logging contractors.

Small scale foresters, with less than 100 hectares, own 30 percent of the production forest estate - more than 443 000 hectares in 1996. With the anticipated large increase in volume harvested from woodlots, OSH would like to encourage a collective effort in risk management now. OSH believes more woodlots will be harvested on steep, hazardous terrain and there is a need for formal integration of environmental and safety risk management.

This is already stated in the New Zealand Forest Code of Practice. The FCoP, in association with existing legislation and guidelines, should offer an effective means of ensuring safe and efficient forest operations that meet the requirements of sound and practical environmental management. The safety and health of the woodlot logger must be the first consideration when selecting cost-effective low impact harvesting techniques. OSH believes that woodlot loggers are part of the sustainable resource which the industry must protect.

Figure 1: Woodlot Accidents: April 1993 to February 1996

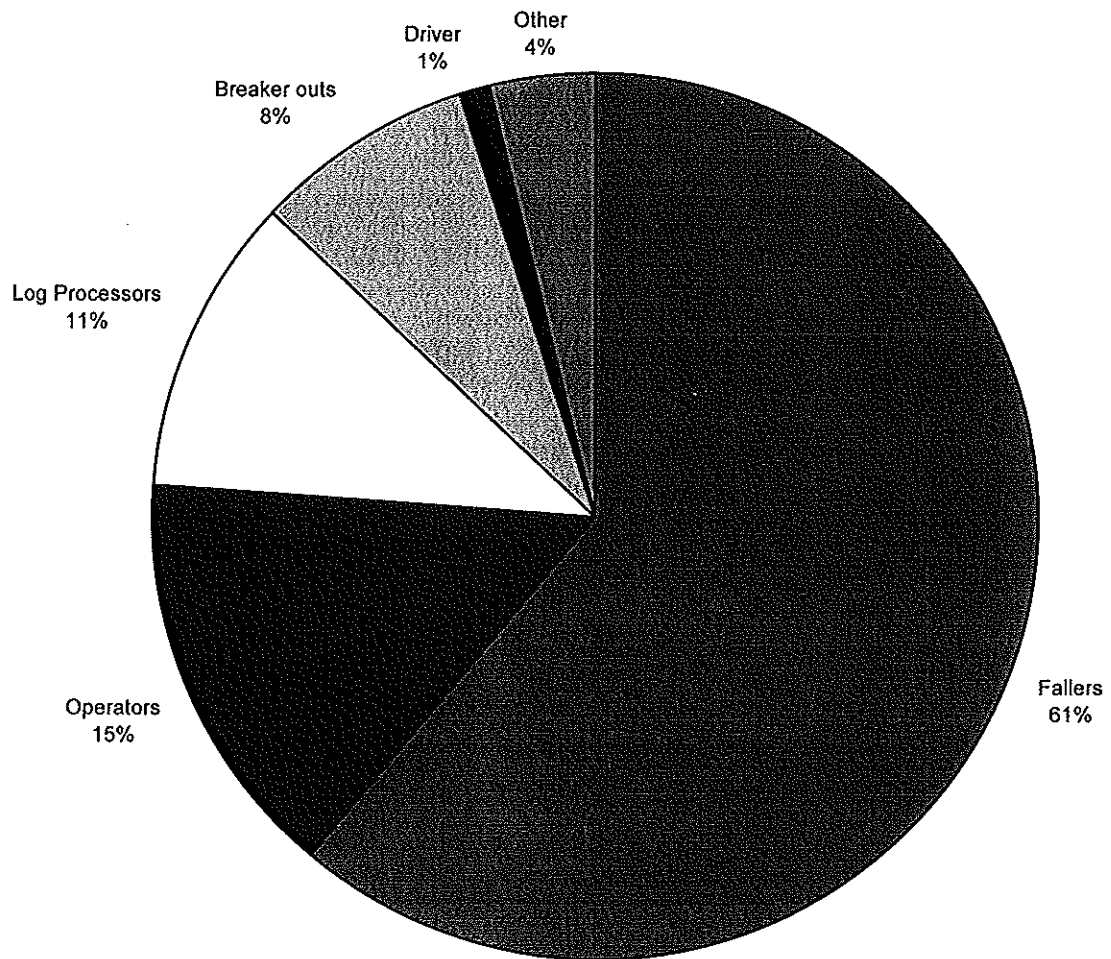


Figure 2: Woodlot Fatalities (April 1993 to February 1996)

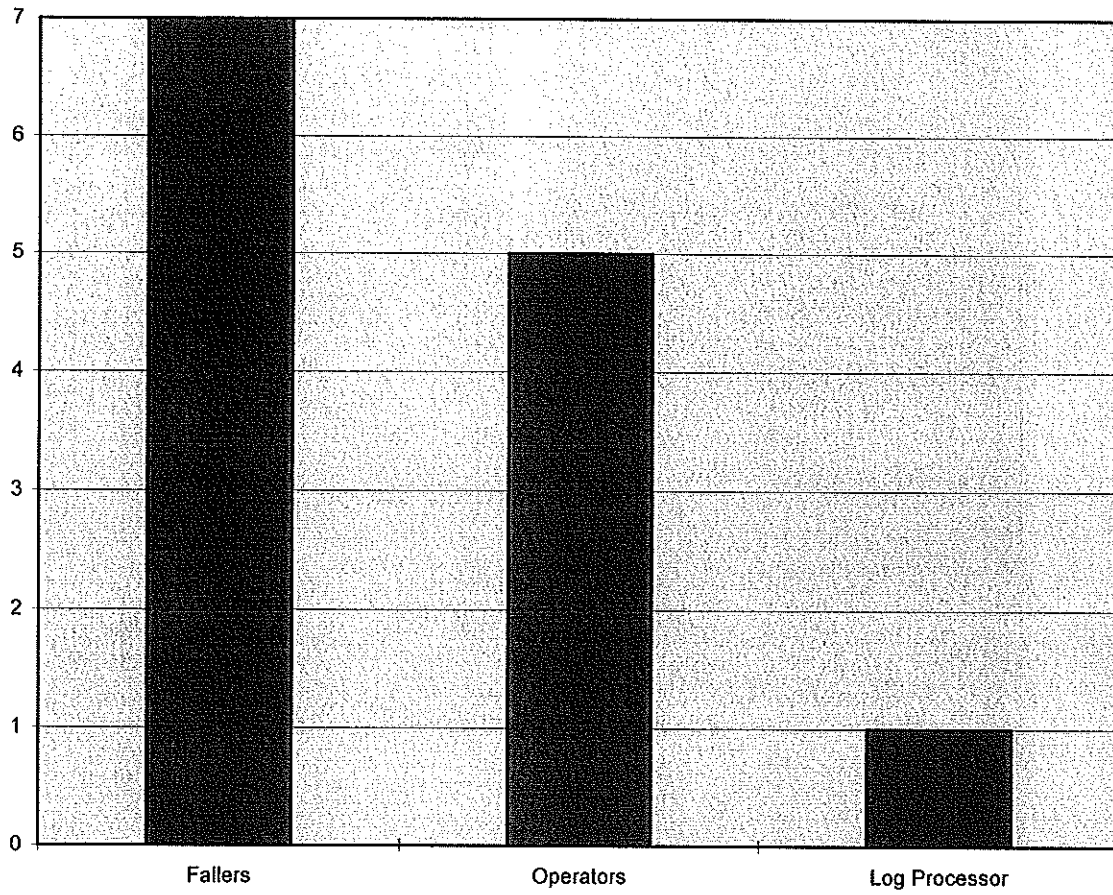


TABLE ONE: Woodlot Accidents: April 1993 to February 1996

Task	Hazards	Fatal
Breaker out	As drag moved a sailor came out of standing timber	
Breaker out	Slipped	
Breaker out	Double-purchase block twisted; log slipped; struck by rope	
Breaker out	Struck by log dislodged by drag	
Breaker out	Hit by logs in drag	
Breaking out	Hit by log	
Driver - truck	In dark; Log hit driver trapping inbetween another log	
Faller	Limb sprang back onto head	
Faller	Hit by wedge	
Faller	Rotten branch fell	
Faller	Cutting stump off uprooted tree; sprang back	
Faller	Limbing; Kick back	
Faller	Cutting crotch off; kick back	
Faller	Fell off log while freeing jammed saw	
Faller	Back-pulling; fell sideways; hit by limb	
Faller	Driving; broke and came back	
Faller	Trimming; chainsaw cut	
Faller	Tripped and fell over bank	
Faller	Trimming above 1.5m fell	
Faller	Unknown	
Faller	Limbing; chainsaw kickback	
Faller	Hit by hung-up tree left by another worker	
Faller	Limbing; branch sprang back	
Faller	Slipped and fell onto saw bar	
Faller	Hit by wedge	
Faller	Hit by wedge disintegrating	
Faller	Hit by sailor while sharpening	y
Faller	Dead hang-up	
Faller	Trimming large branch	
Faller	Trimming; slipped	
Faller	Fell while trimming; chainsaw fell on top	
Faller	Trimming;	
Faller	Petrol splash to eyes	
Faller	Falling branch	
Faller	Trimming on slope; cut by saw	
Faller	Drag hooked into windblow; fell onto him	
Faller	Pulled saw out of cut; cut knee	
Faller	Sharpening saw; saw file slipped; hand hit chain	
Faller	Trimming log; log rolled	
Faller	Slipped off large log; sharp stake	
Faller	Trimming; saw pushed into foot	
Faller	Falling branch	
Faller	Hit by head in drag	
Faller	Sharp stick while moving through undergrowth	
Faller	Trimming; cut foot	
Faller	Trimming; downhill slide; log rolled	
Faller	Steep;	
Faller	Felling dead spa; top fell down	
Faller	Trimming; saw into foot	
Faller	Trimming; Kickback	
Faller	Attempting to fell hangup; wind gust	y
Faller	Trimming; cut to foot	
Faller	Chain jammed; attempted to free; hand slipped onto chain	
Faller	Tractor extracting dislodged rock; steep slope; hit faller below	
Faller	Felling in front of a hangup	
Faller	Hit by large rock rolling down hill	
Faller	Lost control of large tree; ran in front	y
Faller	Trimming; cut foot	
Faller	Uneven ground; trip	
Faller	Winching down hang-up	y
Faller	Driving down hang-up	y
Faller	Felling within two tree lengths	y
Faller	Trimming large log; slid downhill over bluff	
Faller	Loaded branch; limbing;	
Faller	Chain came off while trimming	
Faller - trainee	Went forward of tree being felled	
Faller Assisting	Dead hangup came down from behind	
Faller helicopter	Crosscutting; log slipped downhill	y
Hooker - helicopter crew	Rotor wash dislodged dead top	
Hooker helicopter	Hit by wind blown tree	
Log processor	Heading off log; log rolled	y
Log processor	D6 ran over end of log; log bucked up	
Log processor	Chainsaw cut to foot	
Log processor	Slipped; chainsaw cut	
Log processor	Fell; kickback	
Log processor	Kick back; Not using mitt	
Log processor	Kick back	
Log processor	Slipped	
Log processor	Trimming; Fell	
Log processor	Tripped; fell down bank	
Log processor	Moving for skiddy; cut foot with chainsaw	
Log processor	Sprags in rope	
Logger	Changing wheel on trailer; slipped off block	
Operator	Slope; hooking on log; machine rolled back	
Operator D7	Steep slope; turning. Rollover	y
Operator loader	Put chainsaw into cab; engaged loader;	y
Operator loader	Slipped getting off machine	
Operator -Mechanic on skidder	Skidder on steep slope; pivoted in wrong direction; rollover	y
Operator skidder	Rolled skidder while extracting; Not wearing seat belt	
Operator skidder	Skidder parked; while hooking up skidder rolled backwards	
Operator skidder	Tree rolled onto hand while hooking on	
Operator skidder	Branch entered cab	
Operator skidder	Hit by falling spa felled by a faller	
Operator skiddy	Steep skid track; jumped out of gear; rollover	
Operator skidder	Reversing; No breaks; no seat belt; steep slope	
Operator tractor	Tree fell onto tractor	y
Operator tractor	Rollover; track gave way	y
Operator tractor	Windblow; Drove tractor under falling tree	
Post cutter	Kick back	
Unknown	Fell onto chainsaw	