Chris Goulding

Safety continues to occupy the minds of forest managers. There were five deaths in forestry in 2018 (statistics to mid-November). Dale Ewers' paper in the current issue of the Journal is based on his presentation at the 2018 NZIF conference in Nelson. It describes the innovative engineering his firm is carrying out, where one of the key aims is to reduce the number of serious accidents. His belief, strongly supported by this Editor, is that mechanisation which removes people from the ground, especially in felling, breaking out and skid work, will eliminate risk while increasing productivity. He describes how this reduction in injury is occurring at Moutere Logging Ltd as they have mechanised over the last decade. At the same time, logging equipment specifically designed for New Zealand conditions is increasing productivity, supporting Keith Raymond's paper published in the November 2018 issue of the Journal.

Consequent to the Minister of Forestry's comment that the general public will turn against the plantation forest industry should there be more disasters such as those at Tolaga Bay and Nelson, Keith Raymond and Ross Bawden describe the harvest planning of the Pokairoa catchment, Kaingaroa Forest in 1993 and its relevance for today. Climate change is increasing the likelihood of intense rainstorms. The industry must develop best practices to avoid post-harvest, storm-initiated landslides and debris flows given the power of the mass movement of that debris. As discussed in the November issue, the logging waste itself may need to be removed from a steep cut-over, presumably to be used as fuel.

John Wardle's paper describes how he and his wife commenced establishing radiata pine in 1973 on 28 ha of their property. From 2002, they have adopted an alternative to clearfelling, revisiting a harvest area eight times over the 16-year period, removing trees that had reached a target size and allowing natural regeneration. Retaining a canopy removed the problem of run-off after heavy rain, as well as obviating the necessity to surrender their carbon credits. This system may not be applicable to corporate forestry, but may be an option for a small-scale owner who is prepared for (and enjoys) the intensive management implied.

Dean Meason et al. discuss the challenges in New Zealand of planted forests on water yield, along with how regional councils perceive forestry and water management. The increase in demand for fresh water from the intensification of agriculture and an increasing population is interacting with climate change. Forestry practices and extent have changed over the past 40 years and there is now a need to improve the understanding of water flow downstream from plantations.

The management of people and their careers is every bit as important as the technical aspects of forestry. Ian Reid, Les Bak and Peter Casey discuss the necessity for collaboration, with papers from presentations at the Nelson conference, especially between forest managers and contractors. John Moore's paper discusses the merits of co-innovation between foresters and researchers working together in a forestry company. A scientist working both at a research centre and an operational company has direct access to real-life problems, often access to in-house data and access to practical critiques of their work that ultimately indicates if the investment in science is delivering value for money.

I asked Linda Sewell, CEO of OneFortyOne, if she would write a paper that would be of special interest to the increasing numbers of women in the forestry sector, along the lines of 'How did you get to where you are?' She has produced a paper that is likely to convince women that the journey is worthwhile but will require determination to overcome the inevitable obstacles in their careers.

Dallas Hemphill in the 'Last word' touches on all the papers, suggesting that there is an increased need for forest engineers who have the skills needed for meeting the requirements of planning for NES-PF, the transition to more difficult terrain, the public scrutiny of logging incidents and the emphasis on safety.

In his paper, Peter Casey, with photos of the 1900 and 1913 New York parades, illustrates the tipping point of change alluded to in Raymond and Bawden's paper. He quotes the change from wool to synthetic fibre, and points out that since cell-cultured meat was first developed in the 1970s, its price has dropped dramatically and 'clean meat' produced without an animal is expected to be in restaurants by the end of 2018. Widespread use of the product will probably depend on mothers answering whether the children will eat it for dinner (with chips), whether it is cheaper than the alternative and whether it is easy to cook. Could something similar happen to wood, or more particularly cellulose? Kobayashi and Shoda first chemically synthesised cellulose using a non-biological process in 1992. With the formula of $(C_6H_{10}O_5)_n$, all the natural resources required in an industrial process would be water and CO_2 plus, possibly, sunshine. This would be one extreme way of solving the problems of logging waste and loss of licence to operate.