

QUARTERLY PROGRESS SUMMARY: JULY TO SEPTEMBER 2016.

Steepland Harvesting Programme

This programme outlines a pathway for the New Zealand forest industry to develop innovative harvesting technologies for steep country forests that will reduce costs and make harvesting jobs safer for workers. The Steepland Harvesting Programme has been extended for one year to 30 June 2017 to strengthen the commercialisation of outputs of the programme. A team of business development experts, led by Geoff Todd, Managing Director of Viclink, the commercialisation arm of Victoria University, has been brought together to provide support for the various technology developers and commercial partners in each project.

Summary of progress during this quarter

The main achievements in this programme during the period 1 July to 30 September 2016 have been:

- First meeting of the Commercialisation team of business development experts, to provide support for the technology developers in each project;
- Successful demonstration in July of teleoperation control system for a John Deere 909 feller buncher and remote control unit for a Volvo 290 mobile tail hold anchor machine;
- Development of alpha prototype robotic tree-to-tree machine completed and successful demonstration of the prototype in Christchurch in September.
- Production field trials of the beta prototype Awdon Skyshifter twin winch tail hold carriage commenced;
- Construction and assembly of the Doherty automatic quick coupler and workshop testing continues.

Key highlights and achievements

The Steep Land Harvesting programme, supported by innovative engineering firms and contractors throughout New Zealand, has catalysed the expansion of mechanisation in the New Zealand forest industry, to the extent that mechanised tree felling now comprises 57% of all harvesting operations, up from only 23% of all operations in 2009. The programme has developed a new generation of harvesting technologies, including the ClimbMAX harvester (eleven units now sold, including seven to Canada and one to the U.S.), the first teleoperation control system for a John Deere 909 feller buncher, and a remote control unit for a mobile tail hold anchor machine. Other products include the Awdon Skyshifter, an innovative twin winch tail hold carriage for rapid shifting of the skyline, and the Doherty automatic quick coupler for rapid switching between processor head and log loading grapple.

Sector wide benefits arising from the programme and related outputs to date total \$94.8 million from operational cost savings and machinery and equipment sales (\$48.9 million p.a. in 2015/16). The business plan envisaged cumulative net economic benefits of \$169.1 million (\$69.3 million p.a. in 2015/16), as well as enhanced worker safety. These innovations are providing forest owners and contractors with solutions to improve productivity and reduce the exposure of workers to hazards on steep terrain.

Investment

<i>Investment period</i>	<i>Industry contribution</i>	<i>MPI contribution</i>	<i>Total investment</i>
<i>During this Quarter</i>	\$0.069m	\$0.046m	\$0.115m
<i>Programme To Date</i>	\$3.347m	\$3.308m	\$6.655m
