

# QUARTERLY PROGRESS SUMMARY: JAN – MAR 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.

### Summary of progress during this quarter

The main achievements in this programme during the period 1 January to 31 March 2016 have been:

- Construction of the operator console for the teleoperation control system for the John Deere 909 feller buncher (incorporating operator seat and pedals, and video and audio feedback);
- Installation of remote control into a mobile tail hold anchor machine (Volvo 290 excavator);
- Construction of the alpha prototype remote controlled powered felling wedge;
- Field testing of the beta prototype mobile tail hold carriage for the Innovative Yarding System project;
- Completion of independent review of commercialisation plans for the programme;
- Presentation of Steep Land Harvesting Programme at the International Steep Slope Harvesting Conference in Vancouver, B.C. on 2-3 March, 2016.

### 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 comprise almost 40% of all tree felling operations and 60% of log processing operations. The programme has developed a new generation of harvesting technologies, including the ClimbMAX harvester (ten units now sold, six to Canada and one to the U.S.). In total 48 NZ-built winch-assisted machines are now either operating throughout New Zealand or are in development. In addition a total of 12 winch-assisted machines (including ClimbMAX sales) have been sold into North America.

Other innovative steep country harvesting technologies arising from the programme include the first teleoperation control system for a John Deere 909 feller buncher, and a remote control unit for a Volvo 290 mobile tail hold anchor machine. The remote-controlled Alpine grapple carriage and the CutoverCam hauler vision system are in the early stages of commercialisation and the Awdon Skyshifter, an innovative twin winch tail hold carriage for rapid shifting of the skyline has been constructed and is being field tested. Other products are in final stages of development.

Sector wide benefits arising from the programme and related outputs to date total \$93.6 million from operational cost savings and machinery and equipment sales (\$48.6 million p.a. in 2015/16). The business plan envisaged cumulative direct economic benefits to date of \$168 million (\$66 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

<b><i>Investment period</i></b>	<b><i>Industry contribution</i></b>	<b><i>MPI contribution</i></b>	<b><i>Total investment</i></b>
<i>During this Quarter</i>	\$0.203m	\$0.203m	\$0.406m
<i>Programme To Date</i>	\$3.035m	\$3.033m	\$6.069m

