

QUARTERLY PROGRESS SUMMARY: October – December 2015

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 October to 31 December 2015 have been:

- Demonstration of the remote controlled John Deere 909 feller buncher at the Forest Growers Conference in Nelson in October;
- Further progress in development of the full teleoperation control system (incorporating a mobile control console with operator seat and video and audio feedback) for the John Deere 909 feller buncher;
- Installation of remote control into a mobile tail hold anchor machine (Volvo 290 excavator);
- Completion of construction of the beta prototype mobile tail hold carriage for the Innovative Yarding System project;
- Presentation of PGP Steep Land Harvesting Programme at FORMEC 2015 the 48th International Symposium on Forestry Mechanization in Linz, Austria.

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 (nine units now sold, six of which to Canada). Thirty-five other NZ-built winch-assisted machines are now operating throughout New Zealand, and 10 more are in development. In addition five other winch-assisted machines have been sold into Canada.

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 Alpine grapple carriage and the CutoverCam video camera-based vision system are in the early stages of commercialisation and the Twin Winch Tail Hold carriage, an innovative skyline yarding system has been constructed and is being field tested. By 2015/16 the original business plan envisaged direct economic benefits of \$70.5 million per year, as well as enhanced worker safety. To date the productivity benefits total \$22.2 million and equipment sales total \$40.5 million. 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>	\$0.180m	\$0.180m	\$0.359m
<i>Programme To Date</i>	\$2.834m	\$2.834m	\$5.667m