

COMPARISON BETWEEN MECHANISED AND MANUAL LOG-MAKING IN ITALIAN POPLAR PLANTATIONS

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Keywords: harvester, poplar, value recovery, plantation, mechanization

Abstract: *In Italy, poplar plantations represent an important source of wood products, and especially of high-quality veneer logs. These plantations offer favourable conditions to the introduction of forest mechanization, and especially easy access and industrial management. However, owners fear that mechanized log-making may cause value losses, due to poor length measurement, log surface damage and improper grading. This study compared the performance of manual and mechanized log-making on ten commercial operations, in order to determine the occurrence and the severity of possible value losses due to product degrade. The study found that length measurement errors are smaller for mechanized processing, while the frequency and severity of log surface damage are the same for both treatments. In three cases out of five, mechanized log-making extracted the same value from the stems as manual log-making: in the remaining two differences were very small and went opposite directions. Significant differences were found between operators, stressing the importance of operator skills and motivation.*