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Izvorni znanstveni članak

Costs and efficiency of timber harvesting by NIAB 5–15 processor mounted on a farm tractor

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Sažetak
The present research deals with costs and economic effectiveness of timber harvesting technology with the use of the NIAB 5–15 processor mounted on a farm tractor, which method is used in Poland. Measurements were conducted in pine, fir and spruce stands, which underwent early and late thinnings. During harvesting, a time study was performed using the continuous reading method. On completion of felling works, the volume of timber harvested was measured.
The efficiency and unit costs of timber harvesting were calculated in the operational working time for the chainsaw operator and processor operator.
In all analysed stands, significantly higher efficiency was observed in late thinnings than in early ones. This resulted in higher economic effectiveness of this technology in the thinnings of older age classes. The approximation of regression functions allowed for the prediction of fixed unit costs and efficiency depending on the average volume of trees being removed. The low share of fixed costs in the costs of exploitation by processor proves that a longer shift only affects to a small degree the economic effectiveness of the analysed technology.

Ključne riječi
timber harvesting; thinnings; processor; costs; productivity