

INFLUENCE OF BEECH SAWLOGS (*Fagus Sylvatica L.*) QUALITY ON MILLED LUMBER QUALITY

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ABSTRACT

*This research paper presents results obtained from conducted research under pragmatic conditions. The results correspond to the influence of the sawlogs quality on the milled lumber quality. The logs were from beechwood (*Fagus sylvatica L.*).*

The beech sawlogs, as the key point of research, were graded as 1st and 2nd grade logs.

The sawlogs were with the consistent length of $l = 4,0$ m. The diameter of the 1st grade logs was in the range $d = 33,0 \div 50$ cm, and for the 2nd grade logs $d = 34,0 \div 50,0$ cm. The total number of analyzed logs was 40, 20 logs for each grade. The 1st grade sawlogs had the volume of $V = 11,7$ m³ and the volume for the 2nd grade logs was the same, $V = 11,7$ m³. The 1st grade sawlogs had a diameter taper in the range $S = 0,5 \div 1,0$ cm/m and the 2nd grade logs' diameter taper was $S = 0,75 \div 1,75$ cm/m. The mean value of the diameter taper was as followed: for the 1st grade logs, $S_{sr} = 0,78$ cm/m and for the 2nd grade logs $S_{sr} = 1,26$ cm/m.

It must be noted that the milled lumber values given in this research are relative. After milling the 1st grade logs, the following values were obtained: sawn lumber with a share of 62,80%, dimensional lumber with a share of 18,55%, and heartwood with a share of 18,65%; from a total amount of 100%. The 2nd grade logs gave the following values, from the total amount of 100%: 51,80% sawn lumber; 21,38% dimensional lumber, and 26,82% heartwood.

The dimensional distribution of the milled lumber, for the 1st grade, from the total amount of 100%, was as following: 44,60% long milled lumber ($l > 2,0$ m); 20,84% short milled lumber ($l = 1,0 \div 1,90$ m); 15,91% extra short milled lumber ($l = 0,5 \div 1,0$ m) and 18,65% heartwood. The 2nd grade milled lumber had the following dimensional distribution: 38,20% long milled lumber ($l > 2,0$ m); 14,76% short milled lumber ($l = 1,0 \div 1,90$ m); 20,22% extra short milled lumber ($l = 0,5 \div 1,0$ m) and 26,82% heartwood, from the total amount of 100%.

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