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Static stability of forest stands in the seventh altitudinal vegetation zone in Slovakia

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[fulltext]

Models evaluating static stability (resistance to breaking or uprooting of trees caused by wind, snow or ice) of forest stands in the seventh altitudinal vegetation zone were determined. The empirical material came from 180 research plots (High Tatra and Low Tatra Mountains) established within the research project *Research on methods for mountain forest management based on sustainable Development*. Static stability was characterized by the slenderness ratio that was calculated from the mean height and diameter of target trees. Then the particular forest stands were categorized with regard to slenderness ratio, mean diameter and absolute site class using either tables or graphic models. Particularly, four static stability classes were made up: 1 – very good, 2 – good, 3 – sufficient, and 4 – insufficient. Practical application of the models is shown for forest stands grown in the area of Vajsková and Lomnistá valleys.

Keywords:

Norway spruce; wind firmness; slenderness ratio; static stability classes

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