

**Key words:** soil properties, degraded and other deforested lands, Zlatibor;

## INFLUENCE OF SOIL PROPERTIES ON THE MEAN MAXIMUM HEIGHT OF BEECH ECOLOGICAL UNITS IN THE REGION OF VELIKI JASTREBAC

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The paper presents results of study of influence of soil properties (contents of the skeleton, clay content, depth of solum, A surface horizon thickness, pH value and humus content) on the mean maximum height ( $hg_{max}$ ) in different types of beech forests in the region of Veliki Jastrebac. Namely, the natural fertility of the soil is determined by its physical and chemical properties and biological characteristics of tree species that benefit from that fertility.

Mean maximal height ( $hg_{max}$ ) indicates differences in potential and possibilities of eco-vegetation units with a high level of certainty. The influence of soil properties is best reflected through the mean value of the maximum height. Out of all taxation indicators, mean maximum height value is least affected by care measures, as well as effects and relations existing in the stand.

The study includes two types of soil - humus-siliceous soil and distric brown soil, in the following beech communities: mountain beech forest (*Fagetum moesiarum montanum* Jovanović 1953), mountain beech forest with fescue (*Festuco drymeiur. Fagetum montanum*, Jovanović 1973), high mountain moesian beech forest at higher altitude (*Fagetum altimontanum moesiacum* Jovanović 1985), acidophilus beech forest (*Luzulo-Fagetum moesiacum montanum* Miš. et Pop. 1976) and the forest of beech and mountain maple (*Aceri heldreichii-Fagetum* Jovanović 1957).

Based on the results of the study it can be concluded that there are distinct differences in characteristics between the typical acidic brown soil and distric humus-siliceous soil, which caused the differences in production potential among various types of beech forests in the area of Veliki Jastrebac.

Statistical analysis showed that characteristics of distric brown soil have a bigger impact on the mean maximum height in a typical mountain beech forest

community (*Fagetum moesiacum montanum*, Jovanović 1953) than in other communities. Furthermore, it was found that physical properties of the soil (depth of the solum, thickness of A horizon, content of skeleton and clay content) have stronger impact of the mean maximum height in studied forest types. The less favorable properties of the soil were, the less influence they had on the mean maximum height ( $hg_{max}$ ), and more prominent was the influence of other habitat factors.

**Key words:** soil properties, mean maximum height, beech forests, Veliki Jastrebac