Turkish Journal

of

Agriculture and Forestry



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Turkish Journal of Agriculture and Forestry

The Determination of Some Physical Properties of Beech Wood (Fagus orientalis Lipsky.) in the Andırın Region

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Abstract: The main aim of this study was to determine some physicals properties of the beech wood (Fagus orientalis Lipsky.) naturally growing in the Andırın region (the East Mediterranean region), and compare these properties with those of beech wood growing in the Black Sea region. The physical properties investigated were air and oven-dry density, basic density value, tangential, radial, longitudinal and volumetric shrinkage and swelling. The tests of the physical properties were performed on small clean specimens of beech wood selected from the most suitable stands by following the conventional methods. The average air-dry density, oven-dry density, basic density value, volumetric shrinkage, radial swelling, tangential swelling, longitudinal swelling and volumetric swelling were 0.663 g/cm³, 0.631 g/cm³, 0.522 g/cm³, 7.23%, 7.91%, 0.13%, 15.27% 8.54%, 9.63%, 0.12% and 18.29%, respectively. All the values of the beech wood in the East Mediterranean region were found to be lower than the beech wood in Black Sea Region except for volumetric swelling. From the results of this study, the wood of the Black Sea eastern beech is found to be more stable due to swelling and has high density wood in comparison with the wood of the Mediterranean sea beech; therefore, Black Sea eastern beech wood is recommended in end-use areas.

Key Words: Eastern beech, density, shrinkage, swelling

Turk. J. Agric. For., **25**, (2001), 209-215. Full text: <u>pdf</u> Other articles published in the same issue: <u>Turk. J. Agric. For.,vol.25,iss.4</u>.