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# Assessment of Chestnut Wood Quality

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Massive chestnut wood table

Chestnut (*Castanea sativa* Mill.) wood is classified as a deciduous, circularly porous tree species by its structure. It is one of the most popular tree species for agroforestry systems, either silvoarable or silvopastoral. It provides an increased income source derived from its wood in addition to the chestnuts. The heartwood and sapwood are easily distinguishable. The sapwood is narrow, yellowish, the heartwood is brown. The wood is very similar in color and texture to oak wood. The main difference is the small sapwood rays, which, unlike oak, are not distinguishable by the naked eye in any way from cuts. The wood is medium-heavy, less hard and tough. It has been experimentally proven that its density (509.1 kg.m3) is lower than that of black walnut, cherry, plum or pear. The modulus of elasticity is lower (7.31 GPa) than that of the compared tree species, approaching the values for cherry. The speed of sound propagation is comparable to that of black walnut and sycamore maple, but the value is lower compared to other tree species. The wood tends to crack when it dries. It is naturally resistant to external influences, i.e. resistant to air and water and contains a significant amount of tannins. It is poorly impregnated, easily machined and appears to be better for processing than oak. The wood is used in joinery and the furniture industry, for furniture, floors, parquet, veneers, cladding, stairs and other decorative items.

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