



Turkish Journal of Agriculture and Forestry

Turkish Journal
of
Agriculture and Forestry

Comparison of the Swelling and Shrinkage Characteristics of Corsican Pine (*Pinus nigra* var. *lantana*)

İlker USTA, Arif GURAY

Hacettepe University, Department of Wood Products Industrial Engineering, 06532
Beytepe, Ankara-TURKEY

 [Keywords](#)
 [Authors](#)



agric@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: The objective of this study was to determine the volumetric swelling and shrinkage characteristics of air-dried Corsican pine in the longitudinal, tangential and radial directions. For this purpose, the swelling of the wood was caused by the wood being increased in water whilst placed in a swelling jig, and the shrinkage made in an oven by drying. The experimental results showed that although the differences in swelling or shrinking occur in the first 5 hours, both swelling and shrinkage are then negligible in the three directions. The values of swelling-shrinkage showed considerable difference among different directions; for instance, swelling-shrinkage in the tangential direction was as nearly twice as greater than in the radial direction, and during the experimental period it was considered negligible in the longitudinal direction. Analyses of the data collected during this study suggest that the difference of swelling-shrinking between the tangential and radial directions is caused by the anatomical structure of wood species studied. It is therefore concluded that particularly the wood rays are an important contributory factor in the anisotropy of swelling and shrinkage in Corsican pine.

Turk. J. Agric. For., **24**, (2000), 461-464.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Agric. For., vol.24, iss.4.](#)