



# Turkish Journal of Agriculture and Forestry

Turkish Journal  
of  
Agriculture and Forestry

**Comparative Characterization of the Effects of the Climate–Tree–Growth  
Relationship in Anatolian Black Pine (*Pinus nigra* Arnold subsp. *pallasiana*  
(Lamb.) Holmboe) on Wood Treatability**

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**Abstract:** The effects of the climate-tree-growth relationship on treatability were investigated in the Anatolian black pine (*Pinus nigra* Arnold subsp. *pallasiana* (Lamb.) Holmboe) based on the altitudinal locations at approximately 960 m (B1) and 1010 m (B2) in the former coniferous afforestation area in Beytepe, Ankara, Turkey. This was achieved by analysis of the 1<sup>o</sup> branches at 1, 2, and 3 m tree heights above ground level for the periods 82/98 (March 1982 to February 1998) and 98/04 (March 1998 to February 2004). It appeared that the climatic changes during the period 98/04 had a greater effect on the growth of the trees in both locations, where the differences became more noticeable from base to apex. The trees had more taper but had a larger diameter in B1 than in B2 during 98/04, and this directly affected wood density. Consequently, the faster growing B1 trees had a greater preservative uptake than in the slower growing B2 trees along the trunk. Therefore, to produce wood of adequate density and better permeability, it may be suggested that this species should be planted at Beytepe around the elevation of 950-1000 m with regard to the wider planting space of 2 m.

**Key Words:** Anatolian black pine, environmental factors, tree growth, wood treatability

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Turk. J. Agric. For., **30**, (2006), 305-315.

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