Title The effect of moisture content on the physico-mechanical properties of some hazelnut varieties

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Abstract

To better understand storage design requirements for hazelnuts, this research determined the physico-mechanical parameters (bulk density, true density, angle of internal friction, static coefficient of friction and dynamic coefficient of friction) of hazelnut varieties Tombul, Badem, Mincane, Çakıldak and Sivri, for different structural surfaces. Physico-mechanical parameters (bulk density, true density, angle of internal friction, static coefficient of friction and dynamic coefficient of friction) were considered as the dependent variables, and moisture content (8%, 12%, 16%, 20%) as the independent variable. The temperature recorded in the laboratory during the experiments was 24.3 °C. The highest average value for bulk density (520 kg m^{-3}) was recorded for the Sivri variety, the highest average value for angle of internal friction (35.4°) for the Badem variety, and the highest average value for true density (870 kg m^{-3}) for the Mincane variety. The highest average values for static coefficient of friction (0.411) and the dynamic coefficient of friction (0.287) were recorded for concrete surfaces and the Badem variety.