Abstract

Several physical and mechanical properties of four Turkish chickpea varieties (Hisar, Isik-05, Yasa-05, Azkan, which are major commercial chickpea varieties) were determined and compared in terms of linear dimensions, sphericity, static coefficients of friction at plywood sheet, maximum rupture force in horizontal and vertical direction and load at break in horizontal and vertical direction, in three different moisture contents. Linear dimensions, sphericity, rupture forces and load at break increased at water content levels from 10 to 26% w.b all chickpea varieties. The average length, width, thickness, geometric diameter, sphericity and surface area of four Turkish chickpea varieties were increased with increases the moisture contents.

All the properties of chickpea that provide useful data to engineers in the design of processing machines were generally found the four varieties. In Turkey, harvesting and handling of the chickpea are performed manually. The threshing is usually carried out with a homemade threshing machine. In order to optimize the threshing performance, pneumatic conveying, storage and other aspects of chickpea processing, their physical properties must be known.