Title Aerodynamic properties of coffee cherries and beans

Author P.C. Afonso Júnior, P.C. Corrêa, F.A.C. Pinto and D.M. Queiroz

Citation Biosystems Engineering, Volume 98, Issue 1, September 2007, Pages 39-46

Keywords coffee; aerodynamic property

Abstract

Aerodynamic properties of coffee cherry and beans for two varieties, viz., *Coffea arabica* (cv Catuaí) and *Coffea canephora* (cv Conilon), were studied for moisture content ranges of 9–54% w.b. and 8–56% w.b., respectively. The increase in both moisture content and true density affected the aerodynamic properties of the product by promoting an increase in the terminal velocity and a reduction in the drag coefficient for both cultivars. The values of terminal velocity of the naturally preprocessed coffee cherries did not exhibit significant changes for the analysed cultivars. The values of terminal velocities for the washed coffee beans of cv Conilon were higher than those found for the beans of cv Catuaí. The values of the drag coefficient for both coffee cherries and beans slightly changed during the drying process. However, the variation in the drag coefficient as a function of the moisture content and true density was more evident for the washed beans of Conilon coffee than for Catuai coffee.